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"THE CHEMISTS' AND DRUGGISTS' DIARY, 1909."

THIS popular Annual is already in course of preparation, and firms who desire business announcements to appear in it will facilitate the large amount of work in hand by intimating to the Publisher as early as possible the amount of space they desire to be allocated to them. The permanent character of the *Diary*, which is the desk companion of subscribers to THE CHEMIST AND DRUGGIST during the whole of the year, makes it a particularly effective medium for publicity, while the original, unique, and useful "Buyers' Guide" which it contains creates business daily for *Diary* advertisers. The issue for 1909 marks the forty-first year of publication, and will, it is hoped, excel its predecessors in practical utility. Full particulars as regards terms can be obtained from the Publisher, 42 Cannon Street, London, E.C.

Summary.

The subjoined paragraphs give the gist of the more important matters in this issue, with the object of showing at a glance what has happened during the week. See also "Contents" in the first column.

ABOUT A DOZEN FORMULAS are printed on p. 326.

TWO CASES of infringement of the Medicine Stamp Acts are reported on p. 313.

THE "PHOSFERINE" TRADE-MARK has been the subject of litigation in Tasmania (p. 311).

PARTICULARS of the CONDITIONS under which Professor Omnes liquefied helium are given on p. 318.

SOLANUM SODOMEUM, the Kaffir's um-Tuma, is the South African medicinal plant described by Mr. George Oliver on p. 325.

THE BRITISH PHARMACEUTICAL CONFERENCE first list of papers to be read at the Aberdeen meeting next month is printed on p. 325.

MR. W. S. CLARK'S arithmetical article this week deals with specific gravity, and another series of questions is given for students to answer (p. 306).

ON THE BUSINESS-PUSHING SIDE of pharmacy our readers will find some novel ideas, including the mechanism of a window-fountain, on p. 327.

LETTERS TO THE EDITOR on p. 334 deal with a variety of interesting and practical subjects, and are followed by numerous replies to correspondents.

TWO COMPETITORS SOLVED the last prescription problem. Another curious prescription is reproduced on p. 325, and prizes are offered for postcard renderings.

MALT EXTRACT containing 10 per cent. of proof-spirit has, in South Australia, been ruled to be a medical preparation, and not a liquor when sold by a chemist (p. 311).

ARYLARSONATES appear to have taken a definite place in therapeutics as a specific for syphilis. "Soamin" is the salt used, and particulars in regard to it are given on p. 323.

"Xrayser" discourses this week chiefly upon pharmaceutical education and examinations, on the whole, optimistically. He also deals with the origin of the word "rhubarb" (p. 319).

HEAVY CHEMICAL MANUFACTURERS have been served with the schedules for the products they made last year, this being required under the Census of Production Act. For particulars see p. 321.

THE NEW FRENCH CODEX is in the press. Our Paris correspondent has interviewed Professor Bourquelot, Secretary to the Revision Committee, and gives the latest official particulars about it (p. 309).

CASCARA SAGRADA has been further investigated by Professor Tschirch and its purgative principle contrasted with that of rhubarb. Incidentally it is shown why bitterless cascara sagrada preparations made with magnesia are active (p. 323).

SIR WILLIAM RAMSAY some time ago published evidence of the conversion of copper into sodium and lithium by the emanation from radium. Madame Curie has repeated his experiments in platinum vessels, and fails to get his results (p. 309).

DECIMAL DISPENSING—that is, the compounding of prescriptions written in metric terms—has been approved by the British Medical Association. Some curious statements were in this connection submitted to the members, and are criticised on p. 322.

THE CASE FOR THE TITLE to be restricted to individuals is not dead, according to a correspondent, who sets forth arguments and reasons which he would submit to the House of Commons. Other points in the Poisons and Pharmacy Bill are discussed by other correspondents (p. 333).

MORE PROPRIETARY MEDICINE TROUBLE.—A Bill has been introduced into Orange River Legislative Assembly which requires publication of formulæ on labels, or registration thereof, at a cost of 20s. Every proprietary medicine will have to bear a 3d. stamp. The Bill also deals with labelling poisonous medicines and with other matters in a remarkably absurd manner. (See p. 311 and p. 321.)

THE better tone noted in the drug and chemical markets last week has crystallised into a brisker all-round demand, and several articles are on the upward trend. These include cascara sagrada, chrysophanic acid, ammonia sulphate, acetate of lime, arsenic, hydrastine and serpentary. Russian cantharides, ergot, peppermint oil, quillaia, and copper sulphate are firmer. Benzols, crude carbolic acid, tartaric acid, potashes, damiana, senega, and acetyl salicylic acid are lower. A rise in glycerin seems imminent (p. 329).

Corner for Students.

Conducted by Leonard Dobbin, Ph.D.

SUMMER STUDIES.

Pharmaceutical Arithmetic.

By Walter S. Clark, Ph.C., A.C.G.I.

SPECIFIC GRAVITY.

WE may define the specific gravity of a substance as the ratio of the weight of a given volume of the substance to the weight of the same volume of water. Since the volume of all substances changes on an alteration in the temperature, we should always state the temperature at which the determination is made, but in our calculations and considerations below we shall omit the effect of temperature. Thus:

$$\text{Specific gravity} = \frac{\text{weight of given volume of substance}}{\text{weight of same volume of water}}$$

Since one gram of water measures one cubic centimetre and one avoirdupois ounce measures one fluid ounce, the number expressing the weight of water in grams (or ounces) also expresses its volume in cubic centimetres (or fluid ounces). Note that this is not true of drachms (60 grains) and fluid drachms (60 minims). Hence, if

S = specific gravity of substance,

V = volume of substance in cubic centimetres (or fluid ounces),

W = weight of substance in grammes (or avoirdupois ounces),
then

$$S = \frac{W}{V} \text{ or } V = \frac{W}{S} \text{ or } W = V \times S.$$

For example—

The specific gravity of a substance, 10 grams of which occupy 9 cubic centimetres = $\frac{10}{9} = 1.1$.

The volume occupied by 2 oz. (avoirdupois) of S.V.R. = $\frac{2}{0.834} = 2.398$ fl. oz.

The weight of 2 fl. oz. of olive oil = $2 \times 0.915 = 1.830$ oz. (avoirdupois).

The determination of the specific gravity of solids is based on the Principle of Archimedes, which states:

A solid immersed in a liquid loses as much of its weight as is equal to the weight of liquid displaced.

When the liquid employed is water, the number expressing the loss in weight in grams (or avoirdupois ounces) also expresses the volume of the substance in cubic centimetres (or fluid ounces) for reasons stated above. When any other liquid is used, its specific gravity must be taken into account, as shown in the following example:

Example 2.—The weight of a crystal in air = 40 grains, and in oil of turpentine (s.g. 0.87) = 21 grains. What is its specific gravity?

Here: Weight of crystal in air... = 40 grains

Weight of crystal in turpentine = 21 grains

Weight of turpentine displaced = 19 grains

Now, 19 grains of turpentine of s.g. 0.87 measure $\frac{19}{0.87} = 437.5$

$\frac{19}{437.5 \times 0.87}$ fl. oz., and hence this is the volume of the crystal. Its weight in avoirdupois ounces is $\frac{40}{437.5}$, and there-

fore its specific gravity = $\frac{40}{437.5 \div 437.5 \times 0.87} = \frac{40 \times 0.87}{19} = 1.65$.

In calculating the specific gravity of mixtures we have to assume that no alteration in volume takes place on mixing (or that the volume of the mixture is the sum of the volumes of the liquids mixed). See example above.

EXERCISES.

Students are invited to send in week by week to the Editor, C. & D., 42 Cannon Street, London, E.C., answers to the questions which will be given while this series of articles continues. Prizes will be awarded to all students who answer 50 per cent. of the questions correctly.

Answers to Exercises A

in THE CHEMIST AND DRUGGIST, August 15.

- Using olive oil of s.g. 0.914—
Camphor = 21.47 per cent.
Ol. olivæ = 78.53 per cent.
- Seventy-five grains Fe yields 159.9 grains $\text{Fe}_3(\text{PO}_4)_2$, and this is contained in 160 fluid drachms—i.e., 1 grain per fluid drachm.
- One cubic inch of paraffin wax weighs 215.2 grains, and 1 kilogramme of the same contains 1,176.5 cubic centimetres.
- 46.36 grains of sugar of milk.
- Specific gravity of lin. chloroformi = 1.203.
- 264 grains of the B.P. acid.
- 8.75 grains.
- 11.16 fluid ounces.
- 4.025 grains.
- 54.5 per cent. of ZnCl_2 .

Exercises B.

Students' answers to the following questions should be received by the Editor not later than Thursday, August 27.

In working these exercises—

- Take atomic weights as given in the Pharmacopoeia.
- Enter your solutions in a small exercise book, and do not use one page for more than one question.

- How much of a 1-in-30 solution must be used to make a gallon of 1-in-2,000 solution?
- Find the specific gravity of a mixture of equal parts by weight of olive and castor oils.
- In preparing extractum cinchonæ liquidum 10 cubic centimetres of the percolate was found to contain 0.7 gram of total alkaloids. State exactly how you would proceed to make 1 pint of B.P. extract from this percolate.
- One litre of liquor ammoniæ B.P. is mixed with 1 litre of acidum hydrochloricum B.P. Find
 - The weight of residue obtained on evaporation.
 - The excess of either acid or alkali (as the case may be) by volume.
- Find by calculation whether there is an excess of either ingredient, and, if so, of which, in lotio hydrargyri flava B.P.
- Given that 1.65 gram of a sample of ferrum redactum yielded 460 cubic centimetres of hydrogen (measured at 16°C . and 770 mm. pressure) on solution in an acid, find the percentage of real iron in the powder.
- Show that emplastrum belladonnæ B.P. contains 0.5 per cent. of the alkaloids of belladonna-root.
- In preparing oxymel B.P. the mixture of clarified honey and acetic acid was found to be of specific gravity 1.5. What weight of water must be added to 1 lb. of the mixture to produce the B.P. article?
- The specific gravity of a sample of tinctura nucis vomicæ was 0.9137, and 50 cubic centimetres left on evaporation an extractive weighing 1.379 gram. Calculate the percentage of extractive by weight.
- Find the number of grains of sugar in 1 fluid ounce of syrupus B.P.

Information Wanted.

Inquiries for the names and addresses of manufacturers, or other trade information, not traceable by reference to the advertisement-pages of "The Chemist and Druggist" and the "C. & D. Diary," or not filed in our private register, are inserted here free of charge. Postcard or other replies to any of the subjoined inquiries (addressed to the Editor "The Chemist and Druggist," 42 Cannon Street, London, E.C.) will be esteemed.

- 26/39. What is Siebrosal or Liebrosal?
- 22/2. Where can Microsal be obtained?
- 25/10. Who are the makers of "Cutisol"?
- 22/16. Agents for or makers of "Freez-em" for meat.
- 25/7. Makers of "Woodland" and "Omega" fountain-syringes.
- 22/2. Address of makers of Royle's Domestic Filter, to fit ordinary water tap.
- 25/12. Where can Harriet Meta's milk-of-roses and hair-tonic be obtained?
- 22/21. Makers or proprietors of Archer's American hair-dressing chairs, with canvas bottoms.
- 21/66. Agents for or makers of electric hair-brush with battery on back; also makers of aluminium eye baths.

English News.

Local Newspapers containing marked items of news interesting to the Trade are always welcomed by the Editor.

Brevities.

Napoleon Hirschfield (*C. & D.*, August 8, p. 218) was committed for trial at Brighton Police Court on August 14 on the charge of obtaining money by false pretences.

The Croydon medical officer of health (Dr. H. Meredith Richards) points out with satisfaction in his annual report that hygienic feeding-bottles are now in common use as a result of the health visitor's work.

Mr. F. Beasley, Ph.C., Clapham, gave evidence at Lewes on August 17 in the charge against May Isabel Donald, a Clapham girl, of throwing vitriol over an Inland Revenue officer. She bought the vitriol from Mr. Beasley for photographic purposes.

Charles Frederick Webster, a young man employed by Mr. A. W. Willmott, Ph.C., London Road, Hastings, was found hanging in his bedroom on August 16. Webster was under the impression that he had heart disease, but the trouble was, according to evidence, purely imaginary. At the inquest Mr. Willmott said deceased had never complained to him of heart disease. The Coroner's jury returned a verdict of "Suicide while temporarily insane."

Eric Eggleton, a chemist's assistant living at Putney, failed in a recent Minor examination, and the event had unduly depressed him, for he was found dead, from prussic-acid poisoning, on Chorley Wood Common. He had been discharged by his employer as he was "not up to his work," and in a letter to a friend, in which he threatened to commit suicide, said: "I can't satisfy my employer, and having enough of moving, I am going to do what I have thought of doing—moving once for all."

The Finsbury medical officer of health gives, in his annual report, details of an experiment in the use of dried milk. Fifty-three children were fed on the "modified dried milk," and the average weekly increase was 4.66 oz., and in forty others outside the borough the increase averaged 4.15 oz. weekly. He adds that no doubt the food provides an excellent substitute, not for breast or good cow's milk, but for much of the milk upon which infants are now fed, and refers to the food as "Glaxo."

Contracts.

Godstone (Surrey) Rural Council.—Messrs. Taylor & Bristow and Mr. Farrance to supply disinfectants.

Waterloo Urban Council.—Taylor's Automatic Disinfectors, Ltd., 36 Old Hall Street, Liverpool, the supply of disinfectants.

International Congress of Applied Chemistry.

The provisional programme of the Congress in London to be opened on June 2, 1909, comprises the opening meeting in the Albert Hall, a conversation at the Natural History Museum, a banquet at the Crystal Palace, and lectures by Professors Haller, Otto Witt, and Nasini, and by Sir Boverton Redwood. Committees have been formed in foreign countries to organise the work of the sections, and an Executive Committee has charge of the arrangements at home. The Hon. Secretary is Mr. William Macnab, of 10 Cromwell Crescent, London, S.W.

Curiosities for Chemists.

Some very curious specimens of the paraphernalia forming the stock-in-trade of the medicine-men in the Congo districts were offered for sale in one of the auction-rooms in the West End of London on Tuesday. Among the most interesting of the many lots were a medicine man's carved wooden fetish figure, with pestle and mortar for powdering rare drugs, another mortar with carved ivory pestle, a medicine man's necklet composed of human and other teeth, said to be very rare, and a very curious medicine man's charm with rattle attached. Other belongings of the medicine men in these regions included a variety of amulets, charms, and rattles. Coming nearer home, an interesting lot was an old apothecary's wooden measure and stone pestle, a very rare wood block depicting the interior of an apothecary's shop of about the end of the fifteenth century, showing the drugs, jars, scales, etc., a pair of very old and curious scales—made of mahogany—used by

doctors for weighing babies in the county of Sussex, and a very scarce surgical instrument, used at one time by the old barber-surgeons for cupping.

Analysts Appointed.

Mr. William Marshall, Cheadleholme, Manchester, has been reappointed public analyst by the Hyde (Cheshire) Town Council.

Mr. F. J. Lloyd, F.I.C., has been appointed agricultural analyst by the Kent County Council, at a fee of 11. 1s. per sample. The appointment has hitherto been held by Mr. Sidney Harvey, Ph.C., F.I.C., Canterbury.

Mr. Edward Hinks, B.S., F.I.C., who was associated for some years with the late Sir Thomas Stevenson, has been appointed temporary analyst for the county of Surrey, and the appointment has been confirmed until January 31. In the meantime the vacancy will be advertised, and the Council will be asked to make the permanent appointment from a number of eligible candidates selected by the Council's General Purposes Committee.

Sale of Food and Drugs Acts.

The Finsbury medical officer of health states, in his annual report, that the samples taken included the following: Camphorated oil, 13; olive oil, 1; cream of tartar, 2; Gregory powder, 5; ground ginger, 1; quinine, 3. All were genuine except two samples of camphorated oil.

In the East Riding of Yorkshire, during the year ended March 31, three of five samples of paregoric analysed contained no opium. The following were found to be genuine: Tartaric acid, 5 samples; milk of sulphur, 2; camphorated oil, 4; liquorice powder, 3; and crushed linseed, 5.

The Shoreditch medical officer of health (Dr. L. T. Fraser Brycett), in his annual report, states that during last year the following samples were examined and all found to be genuine: Lemonade, 2; seidlitz powder, 2; cream of tartar, 2; tartaric acid, 1; and mustard, 1.

The Huddersfield medical officer of health (Dr. S. G. Moore), in his annual report, states that of 216 samples of food and drugs examined 196 were genuine. The adulterated samples were milk except in six cases. In no case were legal proceedings taken. Dr. Moore complains that the Sale of Food and Drugs Act continued to be in effect non-operative owing to continual changes in the staff and to the low wages paid to the inspectors.

The Poplar public analyst reports that among the samples taken during the year 1907-8 were: Vinegar, 11; popper, 7; mustard, 6; arrowroot, 1; glycerin, 1; olive oil, 1; cod-liver oil, 1; brandy, 2; camphorated oil, 2; boric-acid ointment, 1; zinc ointment, 1; ammoniated tincture of quinine, 1; tincture of iodine, 1; gentian root, 1; prescriptions, 3. One sample of camphorated oil proved 10 per cent. deficient in camphor, and the vendor was cautioned. The ammoniated tincture of quinine was 13.5 per cent. deficient in ammonia, and in this case the vendor was communicated with.

The Bermondsey medical officer of health (Dr. R. K. Brown), in his annual report, states that no prosecutions were taken during the year in respect of drug samples. Of the samples examined one of tincture of iodine and one out of eighteen samples of white popper analysed were adulterated, but the following all proved to be genuine: Black pepper, 18; malt vinegar, 8; mustard, 8; arrowroot, 7; cod-liver oil, 7; citric acid, 3; castor oil, 3; tartaric acid, 2; camphorated oil, 2; vinegar, 2; bicarbonate of soda, 2; olive oil, 2; lime water, 2; lemonade powder, 2; prescription, 1; Cayenne pepper, 1; Epsom salts, 1; saffron, 1; ginger wine, 1; orange wine, 1; quick lemonade, 1; sal volatile, 1; crushed linseed, 1; ammoniated tincture of quinine, 1; quinine wine, 1; cream of tartar, 1; eucalyptus oil, 1; sweet oil of almonds, 1; ipecacuanha wine, 1; brandy, 1; glycerin, 1; and quinine tonic, 1.

Fred Reynolds Memorial.

We have received from Mr. W. H. Scott, the Secretary, an account of the formal opening of the dormitory extension at Far Arnside, which, with a memorial brass and portrait, constitutes a memorial to the late Mr. Fred Reynolds, Ph.C. The particulars are exactly as given in the *C. & D.* last week, but the event occurred on August 15, and a provincial correspondent got somewhat ahead of time in this matter.

The committee were represented at the ceremony by Dr. and Mrs. W. M. Gabriel (Keighley), Mr. and Mrs. Douglas Russell (Ilkley), Mr. Fred A. White (Leeds), Dr. and Mrs. Capper Johnson (Roundhay), Dr. Vaughan Bateson (Bradford), and Mr. and Mrs. W. H. Scott (Leeds). The ceremony was performed by Mrs. Bagot, of Levens Hall. The donors to the fund will shortly receive a final report from the Secretary.

Manchester Notes.

Diarrhoea is very prevalent in Manchester at present. Over forty deaths, mostly children, through this ailment have been registered during the last few weeks.

The fine weather has tempted many chemists to holiday, and no fewer than eight in the South Manchester district have just returned, all having had a good time.

In spite of depressing reports of bad trade, one bright spot has been the rush for photographic materials this summer, several photographic chemists having already topped last year's turnover.

"The Local Tradesman."

An account of 18l. 18s. 3d. for surgical instruments of Messrs. Raimes & Co., York, came under discussion at a meeting of the Dewsbury Joint Hospital Board on August 13. Mr. Ibbetson complained that the claims of the local tradesmen were not considered, but in reply Mr. Waddington said that the committee desired to consider the local tradesmen in conjunction with other outside contractors. He said in connection with the introduction of diphtheria cases into the hospital, of five tenders from firms who made a speciality of the class of goods ordered the difference between the highest and lowest was about 87 per cent., and if they had applied to the local tradesmen they would probably have had to get the goods from the very people from whom they were now ordering. Mr. Ibbetson then said his point was that the tradesmen had never been asked, and the matter then dropped.

Sheffield Notes.

Master John Douglas Dale, aged fifteen, son of Mr. John Dale, chemist and druggist, Steel Bank Pharmacy, Sheffield, passed the recent College of Preceptors' Preliminary examination for registration as a student of pharmacy.

A Sheffield carter named James Arthur Morley was fined 40s., or seven days, at the Sheffield City Police Court on August 15, for stealing six dozen bottles, the property of Mr. G. T. W. Newsholme, pharmaceutical chemist, High Street. Mr. Austin, manager, said the accused had worked for Mr. Newsholme for fifteen years, and they had no desire to press the case, but wished to stop the petty pilfering that took place.

Cricket.

Stevenson & Howell C.C. scored 100 runs to Macqueen's C.C.'s 84 at Old Oak Farm, Shepherd's Bush, on August 15. For the winners Collins obtained 35 not out.

Barronetta C.C. v. Baiss Bros. C.C.—This match, played at Wormholt Farm on August 15, resulted in a win for Barronetta. Scores: Barronetta, 57 for 9 wickets (Colby 24); Baiss Bros., 25.

Mr. L. J. Morson's Eleven v. Ponders End C.C.—The second annual match between these two elevens was played on the local club's ground at Ponders End (adjoining Morson's Chemical Works) on August 15. The cricket kept the spectators in a state of excitement until the end of the game, which was finally left drawn, although play was continued for an extra quarter of an hour. Scores: Ponders End, 164 runs; Mr. L. J. Morson's XI, 140 runs for nine wickets. Tea, provided by Mr. T. P. Morson, was served during the interval to both players and spectators, the Ponders End prize silver band discoursing excellent music. In the evening an *al fresco* concert was held in the illuminated grounds.

A Semi-Jubilee Outing.

The employes of Messrs. Potter & Clarke, Ltd., 60-64 Artillery Lane, London, E., held the "silver anniversary" of their annual outings at Southend on August 15. The party numbered over a hundred, and included the directors of the company, Alderman Henry Potter and Messrs. H. A. Potter and R. C. Wren. Dinner was served at the Royal Hotel, and presided over by Alderman Potter. After the loyal toast had been honoured,

Mr. C. T. Wren proposed the toast of "The Company and Directors," and regretfully alluded to the death of Mr. Goddard Clarke, M.P. Continuing, Mr. Wren said he believed that this was the first occasion on which all the directors were present. The toast was given enthusiastically with musical honours. The Chairman, in the course of his reply, said how much they missed the genial presence of his late estimable partner, who worked with him for thirty-three years. Referring to the addition of the term "Limited" to the firm name the Alderman hoped the good feeling between the employers and employes would continue. Mr. R. C. Wren proposed the toast of the "Employes," to which Mr. J. Watmore replied. After dinner the party went various ways, many attending the Westcliff Regatta. Tea was provided at the Royal Hotel, and some of the party stayed to see the fireworks from the Leas, an ample choice of trains being provided for the return journey.

The Sale of Laudanum.

At the inquest on Ada Staynes, the wife of an artist living in Holland Park Avenue, London, W., who died from laudanum poisoning taken with suicidal intent, it was stated that she was supplied with fourpennyworth of laudanum by Mr. David H. Walters, an unqualified assistant at Parke's Drug Stores' branch in Holland Park Avenue. In giving evidence the vendor of the poison said he knew he was not entitled to sell poisons, but satisfied himself the deceased was a trustworthy person. When asked by the Coroner how he knew that, and if she was of full age, the witness said by her appearance, and she knew well what it was wanted for, saying it was for rubbing in, and she was not excited. He knew that under the Pharmacy Act he was not supposed to supply poison to anyone, whether respectable or otherwise. The Coroner said that as a matter of fact the deceased swallowed the poison, and he hoped it would be a lesson to him. The witness said he had just given notice to leave to enter college to enable him to pass the qualifying examination. Mr. A. J. Horton was then called. He said he was a manager for Parke's Drug Stores, and was not a registered chemist. The actual manager, who was registered, was away at the time. When asked if he considered it the duty of Mr. Walters to have told the deceased to come back, he said he thought so and would have done it himself. The Coroner (Mr. J. Ingleby Oddie) pointed out that when witness remarked that the poison was only sold for external use it was not labelled, "For external use only." The usual verdict was returned.

Welsh News.

Contract.

Messrs. R. W. Duck & Son, chemists, High Street Arcade, Cardiff, have obtained the Cardiff Corporation's contract for photographic materials and sundries at 2l. 19s. 11d.

Next Week.

The second picnic this season of the Cardiff Pharmaceutical Association will be to Minehead on Wednesday, August 26. The party will leave the Riverside Station by the 2.15 p.m. train, and return by boat from Minehead at 8.30 p.m. For further particulars apply to Mr. Jno. D. Jenkins (Hon. Secretary), 112 Cwys Road, Cardiff.

At the Wells.

Business is booming at Llandrindod Wells, as is evidenced by Mr. W. Stanley Bound, chemist and druggist, opening a new pharmacy within two or three minutes' walk of his other pharmacy. The premises occupy a prominent corner position, and are fitted in up-to-date style, whilst the display of certificates, diploma, and a medal obtained at Mutter's school of pharmacy is remarkable.

Chemist's Wife Killed.

A distressing motor-car fatality occurred at Newport on August 17. Mrs. Eliza Garrett, wife of Mr. T. P. Garrett, chemist and druggist, 35 Stow Hill, Newport, while crossing the road to go to the post-office, was knocked down by a motor-car and so severely injured that she died shortly after her admission to the hospital. The deceased was sixty-four years old and rather short-sighted. According to eye-witnesses the chauffeur was not to blame for the unfortunate accident.

Irish News.

Local Newspapers containing marked items of news interesting to the Trade are always welcomed by the Editor.

Half-a-pint of Laudanum.

On Saturday last a labourer, named Ralph Fleeting, was taken to the Royal Victoria Hospital, Belfast, suffering from the effects of drinking $\frac{1}{2}$ pint of laudanum. He was attended to at once, and three glasses of the poison were extracted from him. Although his condition was serious, he is now recovering.

Empties and Stock Bottles.

At the meeting of the Galway Board of Guardians, Messrs. Clarke & Co., medicine contractors, sent an account for 14/., value of empties not returned. The Clerk said that the doctor was written to over and over again, and the last time he replied that the bottles, etc., contained medicines, and he was not able to return them. The only way to get rid of the difficulty was to get a supply of stock bottles. It was decided to again write to the doctor on the subject.

Scotch News.

Local Newspapers containing marked items of news interesting to the Trade are always welcomed by the Editor.

Glasgow and the West.

Mr. Thomas Welsh, chemist and druggist, has been appointed manager of the Blythswood Drive branch of Messrs. Frazer & Green, Ltd., Buchanan Street, Glasgow.

Mr. John Lothian, of the School of Pharmacy, 180 West Regent Street, Glasgow, has issued an enlarged prospectus for the next session which contains eight good illustrations of the exterior and interior of his school. Particulars are given of Preliminary, Minor, and major classes, correspondence courses, text-books recommended, and a list of successful alumni.

Diving operations have brought to light three bottles of lemonade which were recovered from the sunken steamer *Brigadier* off the island of Harris. Mr. Alexander Robertson, chemist and druggist, Oban, was the maker, and received one of the bottles covered with barnacles. The contents proved, on examination, to be no worse for their eleven years' immersion, but perfectly palatable and briskly effervescent.

An Historic Pharmacy.

Mr. Peter Boa has now transferred his pharmacy from 119 George Street to 58c Morningside Drive, Edinburgh. Mr. Boa's circular to his customers says:

The block of buildings in which he has carried on business for many years has been acquired by the United Free Church, and is to be demolished and rebuilt by them as central offices. He has in consequence had to leave. George Street has for some years been getting less suited for his business owing to the removal of residents from the vicinity. He has decided, therefore, to move to a residential and growing district where there is not as yet a pharmaceutical chemist.

The pharmacy at 119 George Street was started by the late Mr. John Mackay, who commenced business on his own account at 55 George Street in 1838. When Mr. Mackay died in 1882 Mr. Boa became manager of the pharmacy at 119, and a few years later acquired the retail business, the manufacturing and wholesale departments having been removed to Canning Street some years before. The "rooms" of the North British Branch of the Pharmaceutical Society were on the first floor of the premises, 119a George Street, for a dozen years or so, until 1884, when the Society acquired the York Place premises, and the pharmacy was thus familiar to hundreds of young chemists.

COCHIN-CHINA CARDAMOMS.—The exports of cardamoms from Saigon during 1907 amounted to 2,136 piculs, or 127½ tons, valued at 34,176/.

CHEMIST (just arrived): "Much business this morning?" New assistant: "Oh, yes, sir. I've had a busy morning of it. There's been six old women in to look at the directory. I've obliged eight people with postage stamps, besides changing a sovereign."

French News.

(From the "C. & D." Paris Correspondent.)

SUPERIOR COUNCIL OF PUBLIC INSTRUCTION.—Professor Guignard, the distinguished Director of the Paris Superior School of Pharmacy, has been nominated a member of the permanent section of this Council for a new period of four years.

MME. CURIE DISPUTES SIR WM. RAMSAY'S CONCLUSIONS.—At the last meeting of the Paris Academy of Sciences a communication was read from Mme. Curie, in which she throws some doubt on one of Sir William Ramsay's experiments relative to the transmutation of copper into sodium and lithium under radio-active influence. She contends that experiments carried out by herself and an assistant, Mlle. Gleditch, have not given the same results, and Mme. Curie thinks the lithium may have come from the glass vessels in which the experiments were conducted, as when she used a platinum vessel no lithium was produced from the copper salts by the influence of radium. It is only fair to Mme. Curie to add that she does not give these experiments as conclusive, and, of course, Sir William Ramsay's side of the question has to be heard.

HONOUR TO M. CHARLES CRINON.—One of the best-known figures in French pharmacy, M. Charles Crinon, was recently the object of a very flattering attention, when the leading representatives of various French pharmaceutical syndicates met at a banquet given in M. Crinon's honour, and presented him with a handsome bronze statue symbolical of "Honour," in recognition of the numerous services rendered by him to pharmacy. M. Crinon's career is already a long and well-filled one, and he has rendered signal services in his capacity as General Secretary of the General Association of French Pharmacists, of which he was one of the founders. The presentation was made by Dr. Vaudin, the President of the Association, and in those felicitous terms which so many educated Frenchmen possess as a natural gift he referred to M. Crinon's services, to reiterate all of which, he added, would be practically to repeat the history of the Association from its inception. Dr. Vaudin also, with much delicacy of feeling, mentioned that the moment for the presentation had been chosen when M. Crinon had again taken up his multifarious occupations after the trying accident which temporarily disabled him a few months ago. The other speakers included M. Beytout, President of the Syndical Chamber of Pharmacists of the Seine Department; Professor Guignard, Director of the Paris School of Pharmacy; M. Cazeneuve, President of the Pharmaceutical group in the French Parliament; M. Petit, President of Honour the General Association; and M. Riéthe. Having had the privilege of knowing M. Crinon for upwards of twenty years, I am glad to add a tribute in his honour and to express appreciation of his unfailing courtesy, to which is joined a unique knowledge which is sound and many-sided of the various questions relating to French pharmacy.

THE NEW FRENCH CODEX.

INTERVIEW WITH PROFESSOR BOURQUELOT.

Having learned by telephone that Professor Bourquelot, Secretary of the Revising Committee of the new (1908) French Codex, was in Paris, I took the opportunity of calling last Monday afternoon at his pharmacy at the Laënnec Hospital, and was ushered by an attendant into his study. My first greeting was, of course, one of pleasure at being fortunate enough to find the Professor at Paris in mid-August, when most of his distinguished friends and colleagues are at the seaside or in the mountains.

"You may thank the Codex for my presence here," he explained.

"Is the work not quite completed?" I asked.

"All but the preface," he replied. "Here (laying a hand on a bundle of printer's proofs) is the complete Codex, less this essential portion; but the proofs of the preface are being sent in to-day."

"And the book will be published—?"

"September 1 is the date now fixed for its issue, and, as you will have seen by the Government circular, the work becomes official on September 15. But I cannot quite

guarantee it will be ready by September 1. It is possible it may, however, as I am sure the publisher is doing his best."

"I take it, then, that the great body of the work is now absolutely complete?"

"Absolutely. These are proofs of the definition section. In fact, I have little doubt but that the printer has already pulled off a certain number of copies of the whole book—less the preface."

"So it will be the 1908 Codex, instead of the 1905. It must have been an undertaking which has required a good deal of both patience and perseverance. And several of your colleagues have joined the majority while the work has been going on?"

"Yes; we note the fact in the new Codex. Planchon, Moissan, Brouardel, and others have passed away. But we hope the work will give satisfaction. We have sacrificed some 500 old-fashioned galenicals, ninety chemical medicaments, a score of items of *materia medica*, and so on."

"And you have added serums?"

"Yes, five—anti-diphtheritic, anti-tetanus, anti-venomous, anti-streptococcic, and another; also two vaccines and a toxin. These eight new forms of remedies, you see, form a separate chapter, and Dr. Roux edited this part of the Codex."

"And the international formulæ, as agreed to by the Brussels International Conference for the Unification of the Formulæ of Potent Medicaments, have they been adopted?"

"We have embodied all these in the new edition except two—mercurial ointment and syrup of iodide of iron. The latter medicament is largely used for children here, and we felt we could not safely multiply its strength by ten in the rather abrupt manner proposed. So we have retained the old formula, with a footnote pointing out that it is not the international medicament."

"And mercurial ointment?"

"Well, there it was a case of the consistency of the ointment. We have to think of Nice and Algeria; an ointment which is firm enough up north would be liquid in such climates. So we resolved to retain the proportions of ingredients which usage has shown to be practical for French use."

"And so all is settled now?"

"Yes, I am not sorry, and had you called a few days later you would have found me gone."

I wished the Professor the enjoyment of a well-deserved rest, and thanked him for his unfailing courtesy in enabling me to supply *C. & D.* readers with the latest details concerning the new French Codex.

OFFICIAL REPORT AND DECREE.

The following is a report on the subject addressed to President Fallières, asking for his official sanction to publish the new Codex:

Monsieur le Président,—

The last edition of the *Codex Medicamentarius*, or French Pharmacopœia, dates from 1884 (decree of February 13). A supplement of this edition was published in 1895 (decree of January 7). The decree we have the honour to submit for your approval concerns the new edition, which has been prepared by a special Commission named by the Ministry of Public Instruction, in conformity with Article 38 of the Law of Germinal, Year XI. This Commission was composed of members of the Faculty of Medicine and of the Superior School of Pharmacy of the University of Paris, of members of the Academy of Medicine, of members of the Consulting Committee of Public Hygiene of France, and of members of the Society of Pharmacy of Paris.

The Pasteur Institute, the Veterinary School of Alfort, and the Paris hospitals were also represented. That is to say, the Committee offered every guarantee of competence and authority for carrying out satisfactorily the task with which it was charged. By reason of the incessant progress of science, which brings about a continuous evolution in therapeutics, this task has been particularly delicate. The Commission has discharged its duties with a devotion to which it is only proper, in drawing your attention to it, to render a legitimate homage.

By reason of its importance the work the Codex Commission has carried out has of necessity lasted several years, and long ago the new Codex was awaited and claimed by the pharmaceutical bodies in France and abroad. We have confidence that it will be well received by all.

If you will kindly add your signature to the form of decree

sent herewith, the publication of the new French Pharmacopœia will be followed by a few weeks the promulgation of the recent law modifying the organisation of schools of pharmacy in France. This is an important fact to which we feel your attention should be drawn.

The publication of the new Codex does not occasion any expense to the State; the cost of editing and publishing is borne by the firm to whom the publication has been adjudged.

Your most obedient Servants,

(Signed)

GASTON DOMERGUE, Minister of Public Instruction.

G. CLÉMENTEAU, Prime Minister and Home Secretary.

J. RUAU, Minister of Agriculture.

The following is the text of the official decree of President Fallières:

The President of the French Republic; on the report presented by the Minister of Public Instruction, by the Prime Minister and Home Secretary, and by the Minister of Agriculture:

In view of the Law of 21 Germinal, Year XI.

In view of the Law of June 25, 1908.

In view of the decree of February 24, 1893, by which was instituted, by the Ministry of Public Instruction, a special Commission charged with preparing a new edition of the Pharmaceutical Codex.

In view of the new Pharmaceutical Codex edited by this Commission, hereby decrees:

Article 1.—That the new Pharmaceutical Codex (French Pharmacopœia), 1908 edition, is and remains obligatory as from September 15, 1908.

Article 2.—The Prime Minister, Minister of the Interior, the Minister of Agriculture, and the Minister of Public Instruction are charged, each in so far as it may concern him, with the carrying out of the present decree.

Paris, July 17, 1908. (Signed) A. FALLIÈRES,
President of the Republic.

The signing of the Presidential decree was delayed owing to M. Fallières's recent cruise in Northern waters, and consequently the publication of the new Codex has been delayed. It is very evident that if it is not published until September 1 it will be impossible to make its use compulsory throughout France fifteen days later, and thus a certain amount of latitude will of necessity be given.

India and the East.

(From the "C. & D." Correspondent.)

ANALYST FOR SIND.—The appointment of a chemical analyser, with the necessary laboratory and headquarters at Karachi, has been sanctioned for Sind.

TO BE TRAINED IN ENGLAND.—The Syndicate of Bombay University have selected Messrs. S. B. Butani and R. V. Chakrader for a chemical scholarship tenable in England. The former student especially studies chemistry and electrical engineering, the latter metallurgy.

HONG-KONG PHARMACY ORDINANCE.—An ordinance has been passed to provide for the registration of chemists and druggists and to regulate the sale of poisons. All chemists and druggists in business in the Colony must be registered by the Colonial Secretary. Chemists qualified under the Pharmacy Act, 1868, are eligible for registration, and the Governor may admit others whom he thinks qualified to the register.

CHINA JOINS OPIUM COUNCIL.—It is stated *via* Washington that China has formally accepted the date, January 1, and the selection of Shanghai as the time and place for the holding of the meeting of the International Opium Committee. The committee is to make a preliminary investigation into the general question of the opium traffic. It has no plenary powers, but will make recommendations for future action by the various countries.

A BREACH OF TRUST.—Mr. Charles Claude Angier, of the Charing Cross Dispensary (late Symons & Co.), Lahore, was charged on July 2, before Mr. Justice Richards, of the Allahabad High Court, with criminal breach of trust. As an administrator of the late Miss Mann's estate he failed to distribute a portion of the assets, eventually appropriating to his own use the sum of Rs. 3,000. The charge was proved, and Angier was sentenced to six months' imprisonment.

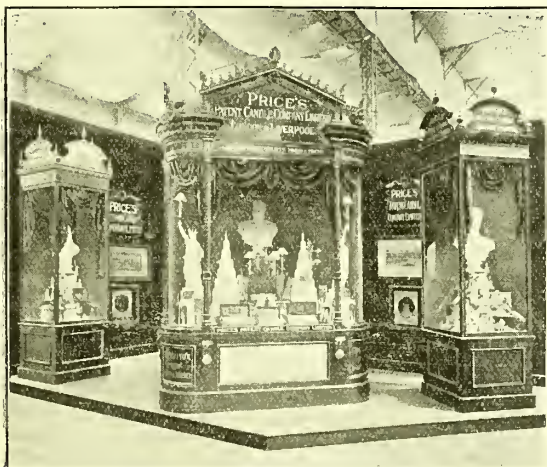
Australasian News.

South Australia.

BRANDT'S MALT-EXTRACT.—At the Adelaide Police Court on July 8, Mr. Arthur Kent Newbery, pharmaceutical chemist, Rundle Street, Adelaide, was summoned under Section 118 of the Licensed Victuallers Act, 1880, for unlawfully selling (he being an unlicensed person) a less quantity of liquor than 5 imperial gallons—to wit, one bottle of malt-extract. For the prosecution it was stated that action was taken in order to try the right of a chemist or any other than a licensed person to sell a malt-extract, (Brandt's in this case) which was a liquor and not a medicine within the Act. The evidence showed that a bottle of the extract was purchased for 10d., and defendant sold it as a medicine, with directions to take a wineglassful after meals. Analysis showed that the extract contained 10 per cent. of proof spirit. Dr. W. T. Hayward (President of the South Australian Branch of the British Medical Association) and Dr. W. Ramsay Smith (Chairman of the Central Health Committee) stated that Brandt's malt-extract is a recognised medical preparation, whose efficacy does not depend upon alcohol, but upon the malt-ferments which it contains. After hearing all the evidence, the Magistrates expressed themselves as satisfied that while the extract is a liquor within the meaning of the Licensed Victuallers Act, in the present instance the sale was made *bona fide* as a medicine. Accordingly the information was dismissed, with 4l. 14s. costs.

Tasmania.

PHOSFERINE TRADE-MARK.—The Chief Justice at Hobart on July 10 decided the action by Messrs. Ashton & Parsons, of London, England, in regard to the "Phosferine" trade-mark. It appears that in 1882 Messrs. H. T. Gould & Co., Elizabeth Street, Hobart, prepared a medicine, and started to sell it under the name of Gould's "Phosferine." In 1894 the proprietors registered the name as a trade-mark for that particular medicine. Messrs. Ashton & Parsons had sold a similar preparation in England prior to 1882, and about that year introduced it into Tasmania. They also called their article "Phosferine," and sold it in Tasmania without interruption until recently, when Messrs. Gould, by virtue of their registration, threatened to prosecute them for an infringement of their trade-mark rights. Messrs. Ashton & Parsons applied to the Chief Justice to give an order for removing Gould's mark from the registry, on the ground that they were the real proprietors of the mark; but the Chief Justice dismissed the application, with costs, holding that Gould & Co. were entitled to register the word as their trade-mark. [Evidence in a New Zealand case heard in 1904 was to the effect that Messrs. Ashton & Parsons introduced "Phosferine" in 1869, and registered the word as a trade-mark in the United Kingdom in 1876.—EDITOR.]



FRANCO-BRITISH EXHIBITION.

EXHIBIT OF PRICE'S PATENT CANDLE CO., LTD.

South African News.

(From the "C. & D." Correspondents.)

Cape Colony.

DRUG-DRINKING IN CAPE COLONY.—Following upon the statistics at the May meeting of the George Farmers' Association (*C. & D.*, July 4, p. 7), the George local police show in the Magistrates' Court that one storekeeper bought in nine months thirty-three dozen bottles of "Hofman's Droppels," thirty-one dozen "Roode Lavandel," and nineteen dozen "Jamaica Ginger." It is said that within thirteen miles there are three storekeepers, and the other two are selling at the rate of twenty-five to thirty dozen bottles per month.

AMALGAMATED CHEMISTS' DANCE.—The Cinderella dance of the Amalgamated Chemists' Cricket Club, held in the Goode Trouw Hall on July 24, was a complete success. The company included Mr. F. C. Mathew (President of the Pharmaceutical Society), Messrs. D. Craig, W. Turnbull, H. E. Cope, L. West, R. Durrant, J. Clayton Smith, D. Thompson, E. Scaife, J. Sowden, and F. Perrie. Mr. E. Blake Jardine acted as M.C., and Mr. L. West was responsible for the decorations. The younger members of the trade, representing the cricketing section, were also present in full force, and the dancing, which commenced at 8.15, was kept up with a swing till 12 P.M.

MEDICAL MALPRACTICES.—Mr. Upington (member for Cape Town) moved in the Cape House of Assembly on July 28 that a Select Committee be appointed to inquire into the working of the Colonial Medical Council in its judicial functions, that the papers and proceedings relating to recent proceedings laid upon the table on July 9 (*C. & D.*, August 15, p. 251) be referred to such Committee for inquiry and report, and that the Committee have power to take evidence. He proposed that the Committee consist of Dr. Beck, Mr. Macintosh, Mr. Tod, Mr. H. S. van Zyl, Dr. Hewat, Mr. Crowright Schreiner, and himself. In moving his resolution, Mr. Upington said he did not desire to reflect upon the integrity of the Colonial Medical Council, but the recent prosecutions in respect to the prescribing of opium showed unsatisfactory features. He thought the Assembly had a right to know how the original prescriptions came into the hands of the Medical Officer of Health, as no Government official or his agent had any right to inspect prescription-books. Also the services of the C.I.D. had evidently been used to a great extent to obtain information, which he held was a wrong principle. He referred also to the inequality of the verdicts of the Council, and he thought the time had come to look into the machinery by which the Medical Council carried out its functions. Dr. J. Hewat, as a member of the Council, said that the Council had no option but to try cases reported to it, and alluded to the possibility of any medical man being called upon to answer a malicious charge. He mentioned also that there was no period for suspension, which created another difficulty for the Council. Mr. de Waal said the Government had not the slightest objection to the appointment of the Committee—in fact, the report of the committee would be of extraordinary use in enabling the Government to complete its decision regarding the desirability of legislation in connection with several alterations of the Pharmacy Acts, as also the revision of the Medical Council itself. He pointed out that wherever a legal point was involved the finding of the Council was invariably submitted to the Attorney-General, and the decision would not stand if he thought the Council had the right to find on the evidence. He hoped the Committee would go carefully into the question of the powers of the Council.

Orange River Colony.

THE NEW BOTANY SYLLABUS for the O.R.C. examination for chemists and druggists has been gazetted and now comes into force.

REGISTERING THE UNREGISTRABLE.—An animated discussion took place in the O.R.C. Parliament last month on the petition of a member "that Carel Abraham Wilken, of Kroonstad, be permitted to render medical assistance." The motion was lost, and the numerous quacks in the Colony will have to wait a while longer for registration as medical practitioners.

INCOME-TAX.—At the July meeting of the O.R.C. Chamber of Commerce a spirited attempt was made by Mr. Dunkerton, of Messrs. Lennan, Ltd., to induce the Chamber to approach the Government with a view to a remission of the annual tax on limited companies, which amounts to 1s. per annum for every 1,000l. of nominal capital. It was decided to bring the matter up again, but little hope was held out of any result accruing.

A DRAFT ORDINANCE "to regulate the sale and labelling of certain preparations containing poison and proprietary medicines and to impose a duty on proprietary medicines" has been gazetted. Rumours had been current for some time about it, but no one anticipated that it would be of such a drastic character. The very savageness of its provisions must defeat its own object. A meeting of the Pharmaceutical Society was called for the evening of August 1, when ways and means of blocking the proposed ordinance were to be discussed, and steps taken in other directions to arouse public interest. The London Chamber of Commerce has been communicated with in the hope that it may render some assistance, as was so efficiently done in the case of Australia. As the O.R.C. Parliament is a docile voting machine for carrying out the wishes of two or three leaders of the Boer majority, it is not improbable that the Bill will be forced through (see p. 320).

Transvaal.

PHARMACEUTICAL SOCIETY'S PRETORIA BRANCH.—At a meeting held in the Transvaal Hotel, Pretoria, last month the chemists of Pretoria unanimously decided to form a branch of the Transvaal Pharmaceutical Society. Some twenty members were enrolled, but it is anticipated that the number will soon be considerably increased. The election of officials resulted as follows: Chairman, Mr. J. R. Jones; Hon. Treasurer, Mr. H. R. Anderson; Hon. Secretary, Mr. A. R. Tibbit; committee, Messrs. P. J. Spruyt, E. Galpin, and Gerrit Baker; representatives on parent Executive Committee at Johannesburg, Messrs. J. R. Jones and A. R. Tibbit. It is proposed to hold monthly meetings.

CINDERELLA DANCE.—The second Cinderella dance held under the auspices of the Pharmaceutical Society took place at West's Dancing Academy, Johannesburg, on July 22. An enjoyable evening was spent, dancing proceeding merrily until one o'clock. Among the company of about a hundred persons were Dr. Avery, Dr. Wallace, Dr. Horwich, C. Keir, A. Rennie, Mr. and Mrs. A. Macdonald, and Mr. and Miss Marshall. The following dance committee were responsible for the arrangements: Messrs. J. Christie, H. M. Hetherington, H. L. Karnovsky, R. Neilson, and S. M. Hendry (Hon. Secretary), and Messrs. A. Purnell (President of the Society) and J. Johnston (Vice-President) acted as M.C.s.

Japanese Jottings.

(From the "C. & D." Correspondent.)

A RICE DIASTASE.—It appears that Dr. K. Okasaki has prepared from rice-bran a powerful ferment of the diastase type which is to be put upon the market under the name of Nippon Diastase. Dr. Okasaki is building a large laboratory at Somci-Mura, near Tokyo, to manufacture the preparation, which has been patented in nine countries.

DR. KOCH and his wife arrived at Yokohama on June 12. Speaking at a grand reception given by twenty-eight medical and scientific societies, Dr. Koch, referring to sleeping sickness, said his experiments in German Africa confirmed the opinion that *Trypanosoma gambiense* is the cause and the fly *Glossina palpalis* the infecting agent. At a later interview, Dr. Koch said he thought that beri-beri and kakke are different diseases, beri-beri being infectious and more deadly than kakke.

TOILET-SOAP EXPORTS.—The exports of toilet soap from Japan during 1907 amounted to 1,186,149 doz. tablets, valued at 607,417 yen, against 1,499,631 doz., valued at 744,524 yen, in 1906, and 1,459,678 doz., valued at 590,060 yen, in 1905. In 1906 the destinations and quantities were as follows: India, 32,753 doz.; Straits Settlements, 37,157 doz.; China, 995,475 doz.; Korea, 115,318 doz.; Hong-Kong, 127,123 doz.; Siberia, 173,309 doz.; and various countries, 78,496 doz.

American Notes.

(From the "C. & D." Correspondent.)

PHARMACIST AND RHODES SCHOLAR.—Mr. Grover Morris, a registered pharmacist of Arkansas, has won a Rhodes scholarship for Oxford University, and is probably the first person connected with pharmacy to obtain the award.

U.S.A. TRADE IN 1907-8.—The Department of Commerce and Labour have issued a statement of imports and exports for the twelve months ending June 1908. The imports were \$1,194,341,792, while a year previous they were \$1,434,421,425, showing a drop of \$240,079,633. Exports were \$1,960,773,345, against \$1,880,851,878 the previous year.

THE RETIREMENT OF SECRETARY THOMAS V. WOOTEN from the National Association of Retail Druggists, announced in this column recently, has proved of considerable embarrassment to the organisation. Many candidates have entered the field, but it is proving exceedingly difficult to find a man with just the right combination of qualities. For this and other reasons the N.A.R.D. is facing something of a crisis, and it seems likely that the annual meeting, to be held during the third week of September in Atlantic City, will be fraught with unusual interest.

BEHIND THE TIMES.—Now that the food and drug laws of the various States are being enforced so rigidly, it has been discovered that a considerable minority of the pharmacists in nearly every State are not in possession of the latest revisions of the U.S.P. and the N.F. In North Dakota, for instance, the Food and Drug Commissioner found that only 124 out of 190 druggists in the State had the eighth revision of the U.S.P. In Ohio it was discovered that about 77 per cent. of the pharmacists either had the last revision of the Pharmacopœia or some dispensatory embodying its formulas.

MEDICO-PHARMACEUTICAL ENTENTE.—There are many evidences in the United States that the pharmacists and physicians are getting into closer accord, and are discovering how they may work together for the obtaining of results beneficial to both. Among other significant things is the recent action of the American Medical Association in appointing a committee of three members to confer with a like committee from the American Pharmaceutical Association in regard to drug reforms, drug legislation, prescription-writing, and other matters of material interest to both Associations and both professions.

CAVEAT VENDOR.—A peculiar Court decision has just been rendered in New York State which may not be without interest and significance to the chemists of the United Kingdom. A man went into a pharmacy, bought a shilling's worth of mercuric chloride, and asked if he should mix the chemical with alcohol or water, telling the clerk for what purpose he intended to use it. The clerk replied that he did not know. Suit was brought on the ground that injuries had been caused by the use of the chemical, and the jury awarded damages of \$250. This decision was upheld on appeal. The Court declared that when a druggist or his clerk sells a substance with a full knowledge of the purpose for which the purchaser intends to use it, he inferentially asserts the drug to be fitted for such purpose, and is therefore responsible for any injuries which may result therefrom.

PHARMACEUTICAL ASSOCIATION MEETINGS.—During June and July some fifteen or twenty State pharmaceutical associations have held their annual meetings. Among the interesting "issues" discussed at several gatherings has been that with reference to the collection of entertainment funds. One association after another has this year decided that it would no longer seek contributions from wholesalers and manufacturers. The druggists have made up their minds that they would "pay their own way," and that hereafter the money necessary for entertainment purposes at the annual conventions would be got by the sale of individual entertainment tickets, supplemented by contributions made by the several local associations throughout the State. In Massachusetts it was even decided to cease the practice of printing advertisements in the annual proceedings, the idea being that these announcements were "a polite hold-up."

Colonial and Foreign News.

GERMANY ADVANCING.—The question of admission of women students to German universities is now settled, according to the "Cologne Gazette." Women who are subjects of the Empire will be admitted under the same conditions as men, but women of foreign nationality must obtain permission for matriculation from the Minister of Public Instruction.

A PLATINUM MONOPOLY.—According to Reuter, the Russian Minister of Finance is about to introduce in the Duma a Bill in connection with a State monopoly of platinum. Although this metal is obtained chiefly in Russia, where the production amounts to some 7 tons yearly, it is generally refined abroad. The Government suggests that it should take over the whole production and sell the metal to other countries at fixed prices. If this project should really come to anything, the price of crude platinum would advance considerably. At present there are only three works in Russia producing refined platinum, but the Government intends to establish new factories.

DUTCH METAL, OF COURSE.—At the annual meeting of the Dutch Maatschappij ter Bevordering de Pharmazie, held at Alkmaar, the following resolutions were passed:

1. To form a commission to collect the formulæ of the most-sold specialities, inclusive of tablets, intended to be replaced by preparations of private manufacture.
2. Another Commission is to elaborate the fundamental principles for the introduction of a general medicinal tariff.
3. To propose being represented in the Government.
4. That telephonic orders regarding prescriptions should be regulated by a law.
5. To empower the Committee to enter into negotiations with the professional societies of other countries to bring about the formation of an international pharmaceutical union.

It was at the same time decided to engage the services of a legal adviser to the Society.

"INDUSTRIAL CANADA."—Dr. A. Shadwell, in his ninth "Times" article on this subject, deals with the industries of Nova Scotia, and remarks in regard to coal and iron:

Subsidiary industries are springing up. One is the Dominion Tar and Chemical Co. [Sydney, N.S.], which treats the coal-tar obtained from the Steel Co.'s coke-ovens. It was established about five years ago by the well-known English chemical manufacturers, Messrs. Burt, Boulton & Haywood; the resident manager is Mr. John Craven, of Manchester. The works include distilling and separating plant, and deal annually with about 20,000 tons of coal-tar, from which crude oil is distilled and the products are partly separated, to be shipped elsewhere for further treatment. The residue is pitch, which is used for briquette-making and for felt-roofing. The latter has led to the establishment of another local industry. Thus manufactures grow. But the concern is greatly hampered by the winter, which lasts well into April at Sydney, and practically hangs up operations for several months, during which everything is buried in snow and frozen hard. Another difficulty is transport; no tramp-steamers call at the port, and they have to be chartered for freight, but they are not easy to get, and a small business does not want a whole steamer.

TRINIDAD ANALYST'S REPORT.—The annual report of Professor P. Carmody, F.I.C., F.C.S., the Government Analyst at Trinidad, states that during the official year 1907-8, 1,211 samples were examined. Those analysed on behalf of the Customs included 251 samples of petroleum, 9 wines and spirituous preparations, 71 lubricating and machinery oils, 24 lard compounds, 9 turpentine substitutes, 1 colza oil, etc. Among the wines and spirits a preparation imported under the name of "kola-wine" was, on analysis, shown to be a liqueur and liable to spirit-duty. Aqua carui and aqua rosæ were found to contain 112.8 per cent. and 144.4 per cent. of proof spirit respectively. On analysis it was shown that many substances imported as turpentine substitutes were not only liable to a higher rate of duty, but their importation was prohibited owing to the large proportion of "dangerous petroleum" in their composition. They have all been re-shipped, as their admission would neutralise the benefits that have been derived by the exclusion (except for certain purposes and under restriction) of dangerous petroleum from the Colony. Investigations were also made into thirty-two poisoning cases.

GERMAN PHARMACEUTICAL LEGISLATION.—A further stage in connection with the German Imperial Pharmacy Reform Bill will shortly be reached by the commencement of the deliberations in the Home Office in the light of the expressions of opinion given on the project by the representatives of the pharmaceutical profession, chambers of commerce, provincial authorities, and Federal States. The Bill has in general met with an unfavourable reception on the part of pharmacists, especially on account of the proposal to introduce the purely personal or non-transferable concession uniformly throughout the empire. It is, however, considered that the failure of the Bill would not materially alter affairs in Prussia, as the purely personal concession has been carried into effect since 1894, but in other States the collapse of the measure would not lead to the introduction of the same system. Recent statistics show that Prussia possesses 4,087 pharmacies, of which 3,326 are main or full pharmacies, and the remainder branch, house, or homœopathic pharmacies and dispensaries. The main pharmacies comprise 2,722 which are transferable and 604 which are personal concessions.

The Week's Poisonings.

FOURTEEN fatalities with poisons have occurred during the week, including two misadventures. An unusual variety is comprised in the poisons causing death. Of the substances taken two were in the first and eight in the second part of the schedule. John H. Mays, a Cardiff hotel porter, a subject to epileptic fits, drank a quantity of paraffin instead of water, which he was accustomed to drink quickly on feeling a seizure coming on, with a rapidly fatal result.—George West (57), labourer, Birmingham, died from the effects of copper sulphate poisoning.—An out-of-work packing-case maker named Roberts committed suicide at Kingsland Road, London, N., by taking spirit of salt.—John Ward (43), a Peckham butcher, committed suicide by means of hydrochloric acid on account of business worries. His accounts were short.—A dose of "blistering liniment" (liquor epispasticus) was administered, whilst "playing mothers," to Mabel Welt, aged sixteen months, by her eight-year-old sister. The child died from suffocation.—The dead body of a man named John Tait (25), engineman, was found in a closed tool-chest at the Benwell Waterworks, Newcastle-on-Tyne. A handkerchief, which had apparently been steeped in chloroform, was over his mouth, and a cup containing chloroform was found near.—Edith E. Thorne (36), house-keeper, Herne Hill, ended her life by drinking carbolic acid.—Samuel Bradshaw (25), Manchester, was admitted to Salford Hospital suffering from the effects of carbolic acid self-administered. He died the same evening.—At the inquest on Mercy R. Standen (44), a Wandsworth widow, the coroner commented upon the determined nature of the suicide; death was believed to be due to carbolic acid poisoning, but deceased appears to have taken spirit of salt as well, and finally hanged herself.—Ada Staynes, the wife of an artist living in Holland Park Avenue, London, W., died from an overdose of laudanum taken with suicidal intent. For report of the case see p. 308.—Eric Eggleton, a chemist's assistant, of Putney, committed suicide by taking prussic acid. (See p. 307).—A verdict of "Suicide while temporarily insane" was returned.—Arthur J. Whitrow, Hotwells, was found dead in his bedroom. It transpired at the inquest that the deceased was a laudanum drinker, but death was due to prussic acid poisoning.—Charles E. Burke (54), an ex-coachman, Fulham, after coming into a legacy, drank heavily, and, on exhausting his resources, poisoned himself with oxalic acid.—Jesse Plummer (68), a Luton gardener, died suddenly from the effects of laudanum poisoning. At the inquest it was said that two bottles were found on a dressing-table in the bedroom, one of which was open. They bore labels of Messrs. Duberly & White, chemists, Luton, and Boots, Ltd., but one of the labels appears to have been put on after the deceased's death. Both chemists said they had sold no laudanum during the week. After considerable discussion a verdict of death from misadventure was returned.

Legal Reports.

Trade Law.

Legal Procedure through a Protection Society.—In the City of London Court on August 14, before Mr. Assistant Registrar Tattershall, in the case of *Evans v. Fletcher & Co.*, the plaintiff, a solicitor, sued the defendants, who are manufacturing chemists, of 21 Water Lane, Great Tower Street, E.C., for a guinea, being the expense of two writs issued on their behalf. For the defendants it was contended there was no retainer on the part of the defendants for the plaintiff to act for them, and it transpired that instructions had been given by the Credit Reform Association in writing. This was a trade-protection society, since gone into liquidation. The point ultimately decided was as to the defendants' liability, and the Assistant Registrar non-suited the plaintiff.

Medicine-stamp Act, 1812.

UNSTAMPED PILLS.

At the Bolton Police Court on August 13, William Murphy Morton, 300 Blackburn Road, Bolton, was fined 30s. and costs for selling unstamped dutiable medicines. It was stated by a solicitor from Somerset House that defendant offered for sale certain pills which were described as of his own manufacture, the label bearing a claim to proprietary rights. The defendant stated that he was induced to take a quantity of the pills for sale, and he was not aware that he was doing anything illegal. Directly he heard that a stamp was necessary he withdrew the pills from sale and destroyed the advertising literature.

GIPEY SARAH'S OINTMENT.

At the Blackburn Borough Police Court on August 14, Richard Hardman, a carter, was summoned, at the instance of the Board of Inland Revenue, for selling a certain ointment without the necessary medicine-stamp, and also for not having a stamped medicine licence. Mr. Carter, for defendant, did not resist a conviction, and was prepared to give an undertaking to discontinue selling the ointment.

Mr. Shaw, of Somerset House, representing the Board of Inland Revenue, said defendant had sold the ointment for a considerable time. He had been warned on one or two occasions, and in March 1905 was fined 5*l.* with 2*l.* costs, by the County Magistrates at Blackburn, which money he paid.

Mr. Carter mentioned defendant's poor circumstances, and said in order to properly maintain his family he, having a recipe from Gipsy Sarah, in sheer desperation started selling the ointment. Other people were selling ointments without prosecution, and he thought that he could do likewise. The ointment was all right, and no exception could be taken to it. If he put the 1½*l.* stamp on it he would not have had any profit on the ointment at all. The Bench pointed out that as defendant had distributed printed leaflets he must have been doing a fairly extensive business. Defendant, promising not to repeat the offence, was fined 2*l.* and costs in each case.

Sale of Food and Drugs Acts.

MACE.

At Chester-le-Street on August 12, the Pelton Fell Co-operative Society were fined 40s. and costs for selling mace containing 27 per cent. of wild mace.

County Court Cases.

CARBOLIC ACID FOR CARBOLIC OIL.

At Axbridge County Court on August 12, before Judge Austin, Mr. Albert Milliard, builder, Upper Langford, sued Mr. E. J. Greateorex, chemist and druggist, Banwell, for 34*l.* 12s. 4*d.*, in respect of damages following on the alleged supply of carbolie acid for carbolie oil. The items of the claim included: Six weeks' total disablement, 16*l.*; one week partial disablement, 1*l.*; pain and suffering, 10*l.*; doctor's fees, 5*l.* 2s. 6*d.* The defendant paid 10*l.* 19s. into Court, but denied liability. Mr. F. E. Metcalfe, for the plaintiff, stated that early this year Mr. Milliard scalded his foot, and sent to Mr. Greateorex for some carbolie oil, which was duly supplied and used. On March 3 a second

lot of oil was sent for, and Mrs. Greateorex, who was in charge of the shop, supplied what was apparently carbolie oil, but after applying it the plaintiff's foot became very bad and he had to call in a doctor. The defendant, on being informed of the matter, wrote regretting that his wife had in mistake served carbolie acid instead of carbolie oil. Evidence was given by plaintiff and by Dr. Pineo, of Langford, the latter stating that the injuries to the foot were consistent with the application of carbolie acid. The defendant, in his evidence, stated that he had not heard from plaintiff from March to June. Plaintiff offered to accept 16*l.* in settlement of the case. Dr. A. L. Veche also gave evidence for the defence. Mr. J. A. March, on behalf of the defendant, admitted that carbolie acid was inadvertently supplied, but contended that some of the injuries were due to plaintiff's carelessness, and the 10*l.* paid into Court was ample compensation. His Honour, however, gave judgment for the plaintiff for 21*l.* and costs.

New Companies and Company News.

FRANÇOISE, LTD.—Capital 400*l.* Objects: To carry on the business of masseurs, chiropodists, manicurists, chemists, etc. Private company. The first subscribers are an engineer and a chiropodist.

BOOTH & Co. (BIRMINGHAM), LTD.—Capital 200*l.* Objects: To acquire and carry on the business of G. H. Booth, 83 High Street, and 387 Mosley Road, Birmingham, teeth specialists. Private company.

MACHINE-LABELLING Co., LTD.—Capital 10,000*l.* Objects: To carry on the business of labelling-appliance manufacturers, etc. The first directors are Sir Edward Sullivan, Bart., F. H. Barker, W. H. Lynch, and A. H. Barker.

GEORGE GOSS, LTD.—Capital 100*l.* Objects: To carry on the business of chemists, druggists, dealers in proprietary medicines, mineral waters, etc. Private company, with G. Goss, chemist, Chorley Wood, Herts, as first director.

VICTORIA AERATED WATER Co., LTD.—Capital 500*l.* Objects: To purchase and carry on the business of the Victoria Aerated Water Co., Ltd. The first directors are J. McKay and W. Morrison. Registered office, East Bog, Bo'ness, Linlithgow.

TRUFOOD, LTD.—Capital 100,000*l.* To acquire certain inventions and to carry on the business of manufacturers of and dealers in alimentary preparations, chemists, druggists, grocers, etc. Private company. The first directors are R. A. Lister, K. K. Carson, F. C. Edwards, J. Baker, E. J. Boake, and H. D. Lewis.

A. S. PRICE & Co., LTD.—Capital 2,000*l.* Objects: To acquire and carry on the business of A. S. Price & Co., chemists, druggists, drysalers, etc., Blackheath. Private company. The first directors are J. H. Price, A. S. Price, and J. H. Price, Jun. (all permanent). Special qualification, 100*l.* Registered office, 181 High Street, Blackheath, Staffs.

EVENDEN'S PURE EXTRACTS, LTD.—Capital 3,000*l.* Objects: To acquire and carry on the business of T. R. Evenden & Co., Heathfield, Sussex, manufacturers of a medicinal extract, hygienic preparations for medicinal food and culinary purposes, to extend the sale of certain sanitary preparations for domestic and veterinary use, etc. The first directors are T. R. Evenden, L. Arnfield, and S. W. Daw. Registered office, 11 Havelock Road, Hastings.

DUMA RADIK ANIMAL MEDICINE Co., LTD.—Capital 1,000*l.* Objects: To acquire and carry on the businesses of the Duma Co., Bampton, Oxon, and the Radik Veterinary Remedics Co., Great Smith Street, Westminster, manufacturers of and dealers in horse, cattle, and animal medicines and foods, etc. Private company. The first directors are C. Bearne, Bampton, Oxon, manufacturer of cattle medicines; R. Blackie, Haslemere, Southend, gentleman; and J. G. Dale, Parliament Chambers, Great Smith Street, Westminster, manufacturer of cattle medicines.

MORTGAGES AND CHARGES.—The following have been registered: *Bell Bros. & Bowes, Ltd.*, mineral-water manufacturers, Brighton. Particulars of 350*l.* debentures, created by resolution of August 7, and issued on August 8. Property charged to general assets. No trustees.—*Serikon, Ltd.*, photographic goods manufacturers, Whetstone. A 5-per-cent. mortgage, dated August 5, to secure 400*l.*, charged on land and erections at Wickford. Holder: R. A. McQuitty, 34 Fenchurch Street, E.C.—The following are totals outstanding on July 1: *Garsides, Ltd.*, grocers, chemists, etc., Ormskirk. Mortgage on leasehold property, 2,737*l.* 19s. 11*d.*—*Tidman & Son, Ltd.*, chemists, London. Mortgage, 1,300*l.*

Bankruptcies and Failures.

Re GEORGE H. WAUGH, L.R.C.P., Druggist and Doctor, of 132 and 134 Grosvenor Road, Belfast.—At Belfast Bankruptcy Court on August 17, before Judge Fitzgibbon, the examination of witnesses in this failure came on. Mr. Young gave evidence as to furniture sold under hiring agreements to the wife of the bankrupt. The total amount was 45*l.* 4*s.* 6*d.*, and 21*l.* 4*s.* 6*d.* is now due. He did not know where Mrs. Waugh is now. The examination was adjourned, and leave was given to advertise the stock-in-trade for sale by tender, the motion being grounded on the affidavit of Mr. George Bell, of Messrs. Bell & Mayrs.

Re JOHN STATHER COUSENS, Borridge Road, Nottingham, Chemist and Druggist.—The examination of this debtor took place at Nottingham Bankruptcy Court on August 14, his accounts showing liabilities amounting to 262*l.* and assets *nil*. In reply to the Official Receiver the debtor stated that he commenced business four years ago with a capital of 16*l.* At the end of the first year he was insolvent. Since then the business showed a profit of 420*l.* for the three years, but that was absorbed in household expenses, and in this connection the Official Receiver pointed out that debtor's income from February 1907 to June 1908 was put down as 56*l.*, while his household expenses for the period were returned at 249*l.* Debtor said he borrowed 230*l.*, and although he had paid back that sum he still owed 75*l.* The household expenses account must be wrong, and the examination was adjourned to allow him to amend the statement.

Re JOSEPH SAUNDERS HEWITT, 175 High Street, Rochester, Chemist and Druggist.—The debtor's statement of affairs shows gross liabilities of 1,409*l.* 18*s.* 11*d.*, of which 484*l.* 12*s.* 3*d.* is expected to rank for dividend. One creditor is fully secured, his claim of 703*l.* 7*s.* 6*d.* being covered by a security whose estimated value is 800*l.*; another is partly secured, 311*l.* 9*s.* 10*d.* (estimated value of security, 212*l.* 12*s.* 6*d.*). Estimated assets 164*l.* 15*s.* 4*d.*, and the deficiency, after allowing for preferential claims, is 302*l.* 9*s.* 2*d.* The cause of failure is stated to be the unsuccessful action brought by debtor against Messrs. Hopkin & Williams (Lim.), the costs of which (353*l.* 17*s.* 6*d.*) fell upon him, when he filed his own petition. He commenced business at his present address in 1875 with a capital of 330*l.*, buying the business, stock, and fixtures for 300*l.* With the exception of the law costs referred to, the unsecured debts are for trade goods—viz., 130*l.* 18*s.* 9*d.* The debtor accounts for his deficiency as under: Household expenses since August 7, 1907, 105*l.*; law costs in action referred to, 353*l.* 17*s.* 6*d.*; total, 461*l.* 17*s.* 6*d.*; less excess of assets over liabilities on August 7, 1907, 39*l.* 8*s.* 4*d.*; net profit from business since that date, 120*l.*; total, 159*l.* 8*s.* 4*d.*; showing a deficiency of 302*l.* 9*s.* 2*d.*

Gazette.

Partnerships Dissolved.

CHAWNER, A., and WALFORD, R. M. H., physicians, Clay Cross and Stonebroom, Derbyshire, under the style of Chawner & Walford.

CLARKE, F. J., and BENTLEY, H., physicians, Mitcham, Surrey, under the style of Clarke & Bentley.

JACKSON, E. N., and BARCLAY, J., soap manufacturers, Liverpool, under the style of Barclay & Co.

LILEY, G., and PINFIELD, H. A., chemists and druggists, Small Heath, Birmingham, under the style of Liley & Pinfield.

SOLLY, E., and BOYD, S. MCC., physicians, Harrogate, under the style of Drs. Solly & Boyd.

The Bankruptcy Acts, 1883 and 1890.

ADJUDICATIONS.

MILLINGTON, THOMAS ASHCROFT (trading as J. & T. A. Millington), Leigh, Lancs, wholesale druggist and druggist.

ADJUDICATION ANNULLED.

McCONNAL, ALLAN, Sowerby Bridge, near Halifax, chemist and druggist.

"NATURE" states that Professor Kamerlingh Onnes's account of his researches on the liquefaction of helium is delayed by illness brought on by overwork.

AN ENGLISH MEDICAL PRACTITIONER (120/11), writing on July 28, says: "It may interest you to know that since qualifying as a medical man, and although now possessed of a considerable practice, I sadly miss the old *C. & D.* weekly, and it is simply to supply this longing that I enclose you the usual 10*s.*"

Business Changes.

PARKES' DRUG STORES, LTD., will shortly open a new branch at King's Parade, Church End, Finchley, London, N.

MESSRS. HEPPELL & Co., 35 Haymarket, W., will shortly open another branch at 4 St. Michael's Alley, Cornhill, London, E.C.

MR. W. E. KIRKMAN, chemist and druggist, late of St. Peter's, Broadstairs, has commenced business at 5 Bank Terrace, New Milton, Hants.

MR. T. JOHNS, chemist and druggist, Tunbridge Wells, has purchased the business of Messrs. R. Perry & Son, Ltd., chemists, 73 High Street, Gravesend.

MR. JOHN STOVIN, chemist and druggist, 13 Broad Street, Lyne Regis, has disposed of his business to Messrs. C. E. Evans & Son, chemists and druggists, late of Moreton Hampstead and Chagford.

MR. G. F. HIRD has opened a pharmacy in the Market Place, Northallerton. Messrs. Ayrton-Graham, Ltd., of Liverpool, have supplied the whole of the fittings, which are of mahogany and plate-glass of very effective design.

Personalities.

MR. HENRY THOMAS, chemist, Croydon, Queensland, arrived in London this week, and is likely to settle here now.

MR. S. W. BUNKER, elder son of Mr. C. J. G. Bunker, chemist, Twickenham, has passed the Intermediate examination for B.Sc.Lond.

MR. G. H. PIERSON, pharmaceutical chemist, Southwark Infirmary, East Dulwich, London, S.E., has passed the recent Intermediate Science examination of the London University.

MR. E. BONTCHEFF, of Messrs. Bontcheff & Kidoff, otto of rose exporters, Kazanlik, Bulgaria, is now in London, and may be addressed c/o his agent, Fredk. Boehm, Ltd., 16 Jewry Street, London, E.C.

MISS LUCY E. SPENCER PALMER, aged eighteen, daughter of Mr. J. Spencer Palmer, chemist and dental surgeon, Coronation House, Thornbury, Glos., has passed the Intermediate Arts examination of the London University.

MR. FRANK ROSS, of Calcutta, is now in London for the purpose of buying stock for his new venture as a wholesale and retail chemist at 15 Chowringhee Road, Calcutta. Letters for him may be addressed to 42 Cannon Street, E.C.

At the marriage of Mr. John Churchill, brother of the Right Hon. Winston Churchill, to Lady Gwendeleen Bertie, Mr. G. Claridge Druce was among the invited guests to the luncheon at Wytham Abbey, the seat of the Earl of Abingdon.

MR. F. G. FOSTER, chemist and druggist, Mayor of Portsmouth, performed the ceremony of opening the new South Parade Pier at Southsea last week, and was presented on behalf of the contractors with a model in silver of the pavilion. The new pier cost 70,000*l.*

MR. DAVID TURNER, manager of the British Dispensary, Singapore, left for home on leave by N.D.L. mail steamer on July 21. Mr. Timms is in charge of the British Dispensary during Mr. Turner's absence. Letters may be addressed to him c/o THE CHEMIST AND DRUGGIST office.

A MARRIAGE has been arranged, and will take place on September 15, between Mr. Walter T. Grice, F.C.S., of Messrs. Smith, Stannistreet & Co., Calcutta, and Miss Helen Symington, daughter of Mr. and Mrs. Symington, of Allanton, Auldgrith, Dumfriesshire, and formerly of Calcutta.

MR. F. A. YEOMANS, chemist and druggist, 137 Knutsford Road, Warrington, was presented with the Royal Humane Society's testimonial, inscribed on vellum, by Mr. S. Brighouse (Coroner) at the Warrington Coroner's Court on August 17. Mr. Yeomans attempted to rescue a youth from drowning in the River Mersey on June 1 (*C. & D.*, 1908, I., 884).

Births.

BOURDAS.—At 6 Pont Street, London, S.W., on August 11, the wife of Isaiah Bourdas, jun., of a son.

HARVEY.—On August 18, at 32 Bramham Gardens, S.W., the wife of Ralph Key Harvey (Messrs. Barron, Harveys & Co.), of a son.

STEWART.—At 9 Orr Square, Paisley, on August 18, the wife of Hawthorn Stewart, chemist, of a daughter.

WILSON.—At Marikuppam, Kolar Goldfield, India, on July 15, the wife of George Caldwell Wilson, chemist, of a son.

Marriages.

ECCLES—MAHAFFY.—At St. James's Church, Kildare, on August 14, by the Rev. F. W. W. Warren, B.A., Robert Irwin Eccles, Ph.C., Athy, to Evelyn, daughter of Mr. James Mahaffy, J.P., of Belturbet and Cliftonville, Belfast.

SKILBECK—BROCK.—At Coventry Road Congregational Church, Birmingham, on August 19, by Rev. A. H. Lemon, M.A., John Mason Skilbeck, F.S.M.C., chemist, Stockton-on-Tees, to Lily Madge, only daughter of Mr. R. Brock, Small Heath, Birmingham.

Deaths.

BERNARD.—The death occurred recently in Paris of M. Gaston Honoré Bernard, co-scientific director of the Pharmacie Centrale de France at Lyons, at the age of forty-four years. He was taken ill while in Paris on his return from a visit to the Franco-British Exhibition in London.

BROOK.—At Whitefield, near Manchester, on August 15, Annie, the wife of Mr. Edward Brook, chemist and druggist, aged fifty-nine years.

DUNCAN.—At Boquhan, Balfour, Stirlingshire, on August 17, Mr. James Allan Duncan, eldest surviving son of Mr. Joseph Duncan, pharmaceutical chemist, 34 Ashfield Terrace, Gibson Street, Hillhead, Glasgow.

GARDENER.—At 74 Cranbrook Road, Ilford, on August 18, after a long and painful illness patiently borne, Eliza, the dearly loved wife of John Gardener (Messrs. Howards & Sons, Ltd.), in her sixty-fifth year.

HOLROYD.—At his residence in Stoke Newington on August 14, from heart-failure, Mr. Arthur Holroyd, chemist and druggist, aged fifty-seven. Mr. Holroyd served a five-years' apprenticeship in his native city of Hull to the late Mr. Gibson, and passed the Minor examination in 1873. For some years previous to his death he was warehouseman to Messrs. Hearon, Squire & Francis, Ltd., 38 Southwark Street, S.E., by whom he was held in the highest esteem, having been with the house over thirty-two years. His knowledge of the drug-trade was both intimate and practical, and reflected the personal experience he had gained in the various departments in which he was successively engaged. Mr. Holroyd was known to many pharmacists who, as students at the schools and colleges of the metropolis and the provinces, visited Messrs. Hearon, Squire & Francis's premises, his intimate acquaintance with materia medica having been apparent to them in his exposition of the adulterants of drugs which are picked out before the genuine articles reach retailers. He leaves a widow, two sons, and two daughters.

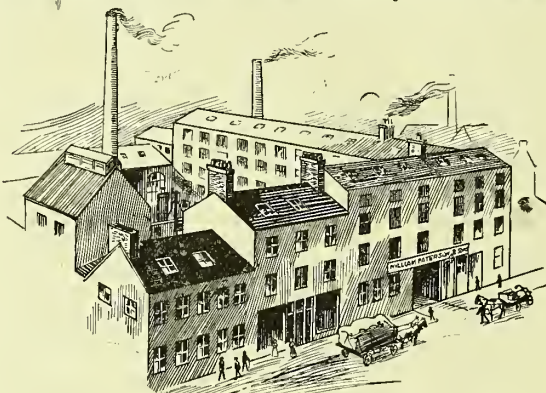
Recent Wills.

The late Mr. ROBERT BYERS RAE, retired chemist, Edinburgh, formerly of 1 Strainon Place, Portobello, left personal estate valued at 802*l.* 8*s.* 7*d.*

Mr. DAVID JENKINS, chemist and druggist, Kenfig, formerly of Wyndham Street, Bridgend, who died on June 7 last, left estate of the gross value of 3,668*l.* 2*s.* 11*d.*, with net personalty 2,097*l.* 6*s.* 3*d.*

Aberdeen Wholesale Druggists.

WHEN writing of Aberdeen pharmacy in our Summer Issue we mentioned that in 1885 there were five firms who did a wholesale business, and of these two firms remain, who are entirely wholesale. The older of these is the business of Messrs. William Paterson & Sons, Spring Gardens. This business was commenced by William Pater-



son, who, after serving an apprenticeship in Aberdeen, had started business in Stonehaven, and remained there a few years. On returning to Aberdeen in 1841 to commence business as a wholesale druggist he took premises in Broad Street, but after a year or two he went to larger premises in the Gallowgate. As the trade increased he built a new warehouse in that street, and his son James joined the business. At his death his son Henry became a partner, and remained a few years in partnership with James. When he went out of the trade another son, Stephen, who had been with Duncan, Flockhart & Co., Edinburgh, joined his elder brother. On Mr. James Paterson retiring, Mr. Stephen Paterson carried on the business until his death, having removed it from Gallowgate to Spring Gardens. The business is now carried on under the able management of Mr. A. R. Horne.

The business of William Davidson, wholesale druggist, which was recently registered as a company with Mr.



A. C. Bonner as managing director, was established in 1866, the founders being Mr. William Davidson and Mr. James

Sim. At its formation it was known as Davidson & Sim, and the premises were in Castle Street. Both partners had learned the wholesale drug trade with Messrs. William Paterson & Sons, and previous to starting in Castle Street Mr. Davidson for some years carried on a retail business at Fetterangus, in Aberdeenshire, while Mr. Sim was in London with Langdon's. When the firm attained its majority in 1887 Mr. Sim withdrew from the wholesale trade, and opened the Aberdeen Pharmacy in Bridge Street, where he pioneered the "cutting" trade in Aberdeen. Mr. Davidson then carried on the business on his own account until his death, which occurred about ten years later. Mr. Bonner, who had been associated with his principal in the management of the business, then took it over. A few years later the present commodious warehouse in Palmerston Road, consisting of five floors, was built, and in 1901 the business was transferred to it.

Trade Notes.

MERCK'S ANNUAL REPORT for 1907, which was briefly reviewed in the *C. & D.* of July 18, is sent out from the London office of the firm at 16 Jewry Street, E.C., as well as from Darmstadt, and subscribers may obtain copies from London.

JEYES' ANTISEPTIC TELEPHONE CAP has been improved by the addition of two springs, which enable the cap to be adjusted to any size of telephone mouthpiece. The caps are made by the Jeyes' Sanitary Compounds Co., Ltd., 64 Cannon Street, London, E.C.

CHEMISTS with a photographic department will be interested in the new English bronzine art-metal photo-frames which have been introduced by Messrs. John J. Griffin & Sons, Ltd. The design of the sample submitted is neat, yet bold and artistic. The cabinet size is 1s., the postcard size selling at 9d., and the midget size 3d.

ENGLISH ESSENTIAL OILS.—Messrs. J. & G. Miller, Mitcham, Surrey, have published a reprint, with three illustrations and a good portrait of Mr. G. Miller, of an article on "The Distillation of English Essential Oils," from the Gentleman's Journal of May 16, which shows the great amount of care and material required in the production of Miller's "English" peppermint oil.

MESSRS. BURROUGHS WELLCOME & Co., Snow Hill Buildings, London, E.C., now issue the following two combinations: Atropine sulphate, $\frac{1}{300}$ gr., and strychnine sulphate, $\frac{1}{100}$ gr.; and atropine sulphate $\frac{1}{100}$ gr., and strychnine sulphate, $\frac{1}{80}$ gr., in "tabloid" form for hypodermic injection in tubes of twenty. The new series is to afford a convenient mode for carrying out the treatment of inebriety and narcomania since the hypodermic administration of small doses of atropine and strychnine is now recognised as a means of combating the "drink-crave."

"ALLENBURYS" FOODS.—Messrs. Allen & Hanburys, Ltd., Bethnal Green, London, E., have made a new departure in bringing to the notice of the public the merits and properties of their infants' foods by taking whole pages in several of the leading morning newspapers for an article entitled "How to Bring up Baby." We have seen a proof, a reduced facsimile of the page which they are inserting in this issue of the *C. & D.*, in order that chemists, as retailers of the foods, may see what Messrs. Allen & Hanburys are doing to maintain and increase sales. As the prices of the foods are protected, no class of shopkeepers have in this respect any advantage over chemists, while the latter have the distinct advantage of being frequently consulted by parents about feeding their babies. We may also state that the firm have printed an edition of "How to Bring up Baby" in pamphlet form, and they will be glad to supply chemists, on application, with these for distribution to desirable customers. It is a most interesting pamphlet, and contains many dietetic, hygienic, and treatment notes which appeal to mothers. The firm also inform us that they are always prepared to supply chemists who ask for them with showcards and dummy food-tins for window-displays. It is obvious to business-men that the benefits resulting from an advertising-scheme such as "Allenburys" are directly reaped by those who co-operate with the advertisers.

Trade-marks Applied For.

Objections to the registration of any of the undermentioned applications should be lodged with Sir C. N. Dalton, K.C.M.G., C.B., Comptroller-General of Patents, Designs, and Trade-marks, at the Patents Office, 25 Southampton Buildings, Chancery Lane, London, W.C., within one month of the dates mentioned. The objection must be stated on Trade-marks Form No. 7, cost £1, obtainable through any money-order office.

(From the "Trade-marks Journal," July 29, 1908.)

- "KILLTOL"; for a corn-cure. By Lewis & Burrows, Ltd., 22 and 24 Great Portland Street, London, W. 303,048.
- "BRYONIC"; for a medicated bath salt and toilet salt. By the Ozonia Co., 8 Westland Row, Dublin. 303,102, 303,103.
- Label device for ELIXIR "QUINACINAS"; for a medicine. By Roberts & Co., 76 New Bond Street, London, W. 303,357.
- "KAMNIBIN"; for a medicine. By the Standard Tablet and Pill Co., Hove, Brighton. 303,574.
- "SPECIFIC REMEDY Co." (and label device); for goods in Class 3. By James Ashton, Ardamm Rectory, Gorey, Ireland. 303,654.
- "SKYBRAND"; for strychnine. By C. F. Boehringer & Soehne, Sandhoferstrasse 26, Waldhof, near Mannheim. 303,705.
- Label device (friar reading); for a medicine. By Thomas Friar, 109 Masters Road, West Bridgford, Nottingham. 303,964.
- "LIN-CHES"; for a liniment. By Henry Cheshier, 78 Blackhorse Lane, Walthamstow. 303,809.
- Label device (developing lymphol in foreign characters); for a rupture-cure. By William S. Rice (R.S.), Ltd., 8-9 Stonecutter Street, London, E.C. 304,070.
- "BOX'S GOLDEN FIRE"; for medicines. By W. H. Box, 161 King Street, Plymouth. 304,094.
- "JREHIGAL"; for chemicals in Class 3. By H. Barkowski, 22 Alexanderstrasse, Berlin. 304,135.
- "CURACHO" and facsimile signature of patentee; for an embrocation. By Chas. F. Waters, Rose and Crown Hotel, Sudbury. 304,195.
- "SUNBEAM"; for photographic accessories. By Thornton-Pickard Manufacturing Co., Ltd., Altrincham. 301,048.
- "ARTEX"; for goods in Class 8. By B. J. Price Roberts, 6 Pulteney Street, Bath. 303,845.
- "B. B. B." and eagle device; for surgical instruments, etc., in Class 11. By Bandekow Bros., 7 and 8 Belle-Alliance Platz, Berlin. 302,935.
- "OXCELLO"; for extract of beef. By Leventon & Co., G., Exchange Buildings, Liverpool. 303,448.
- "AURANTIA"; for food substances in Class 42 and mineral and aerated waters in Class 44. By Stevenson & Howell, Ltd., 95A Southwark Street, London. 304,170, 304,171.
- Coat of arms; for mineral waters. By C. F. Davey, Benar View, Blaenau Festiniog, Wales. 303,690.
- "FLAKO"; for candles, common soap, etc., and perfumery. "SNOWDOWN"; for perfumed soap. By John Knight, Ltd., the Royal Primrose Soap Works, Silvertown, London, E. 303,401-2 and 4.
- "KNOCK OUT"; for candles, common soap, etc., and for perfumery. By the Co-operative Wholesale Society, Ltd., 1 Balloon Street, Manchester. 303,530, 303,531.
- Label device; for Ess. Bouquet, a perfume. By Bayley & Co., 94 St. Martin's Lane, London, W.C. 300,236.
- Label device; for eau de Cologne. By Johann M. Farina, Alexianerstrasse 5, Cologne-on-Rhine. 302,225.
- "CREMONA," and picture of violin; for perfumery, etc. By Juliette A. Day, 55 Lorne Road, Brixton. 302,459.
- "APOLLO," and picture of lyre; for goods in Class 48. Erste osterr. Seifensieder-Gewerks-Gesellschaft "Apollo," 6 Apollgasse, Vienna VII. 302,768.
- "EUKALIA"; for perfumery, etc. By Fred. Guy, 11 and 12 North Street, Brighton. 303,735.
- "CAPOL"; for cosmetics. By Capol Co., 122 Queen's Street, Preston. 304,076.
- "NOVOVIOL," "NOVOVIOLON," and "NOVOVIOLONE"; for perfumery. By Schimmel & Co., 1 Bahnhofstrasse, Milititz b. Leipsic. 304,125.
- "DIL-BAHAR"; for perfumery, etc. By the Anglo-Indian Drug and Chemical Co., 16 Market, Bombay. 304,383.
- "PAOS"; for goods in Class 48. By Charles E. Green, 49 Hatten Garden, London, E.C. 304,478.
- "LE NEGRI," and also label device; for toothpicks. By Société d'Hygiène "Le Negri-Pipoz," 12 rue du Helder, Paris. 304,035, 304,036.

Scientific Progress.

Temperatures under this heading are on the Centigrade scale.

Double Phosphate of Magnesium and Mono-methylamine.—M. Francois ("Jour. de Pharm. et Chem." xxviii. 3, 1908, August 1, 97) shows that on mixing in dilute solution containing quantities proportionate to one molecule of sodium phosphate, one molecule of magnesium sulphate, and two molecules of mono-methylamine, an insoluble gelatinous precipitate of double phosphate of mono-methylamine and magnesium, which slowly becomes crystalline, is produced analogous to magnesium-ammonio-phosphate. Under like conditions, di- and tri-methylamines do not form double phosphates. This result shows that M. Quantin's process for the quantitative separation of ammonia from admixture with methylamines, based on the formation of insoluble magnesium-ammonio-phosphate, is not applicable in the presence of mono-methylamine.

Hydrogen Trisulphide.—I. Bloch and F. Höhn ("Ber." 41, 1961) treated diluted solutions containing polysulphides corresponding to Na_2S_2 , Na_2S_3 , Na_2S_4 , and Na_2S_5 by allowing them to flow into an excess of diluted cooled hydrochloric acid at a temperature between -10° and 0° . The separated yellow oil (crude hydrogen persulphide) was apparently a mixture, so it was subjected to distillation in an apparatus in which the air had been replaced with dry hydrochloric-acid gas. Three fractions were collected, the middle one corresponding exactly to hydrogen trisulphide H_2S_3 , a yellow liquid at ordinary temperatures but colourless at lower temperatures, sp. gr. 1.496 at 15°C . and solidifying at -52° to -54° . It is more inflammable than the crude persulphide, burning with a pale blue flame. Pure hydrogen disulphide, H_2S_2 , sp. gr. 1.376, and boiling at 74° to 75°C . was also separated by fractional distillation of the first portions. The vapour strongly attacks the mucous membranes.

Colloidal Sulphur.—According to M. Raffo ("Z. Chem. Ind." 2, 358, through "J.S.C.I." xxvii. 14, p. 747) colloidal sulphur can be obtained in quantity by pouring a concentrated solution of sodium thio-sulphate (50 gm. in 30 c.c. water) into strong sulphuric acid (sp. gr. 1.84) (70 gm.), which is kept cool. Water (30 c.c.) is added, the whole shaken, and warmed to 80° for ten minutes. The soluble sulphur is removed by filtration through glass-wool; on cooling, more yellow sulphur is deposited, and the operation of warming, filtration, and cooling is repeated until all the insoluble sulphur is removed. A turbid yellowish-white substance should remain, which forms a clear yellow liquid on warming. The sulphur is allowed to settle on cooling, is separated in a centrifuge, and washed with a very little cold water. The residue is dissolved in as small a quantity of water as possible, and

neutralised with sodium carbonate, which causes the greater part of the sulphur to separate, which on separation by centrifuge gives a sediment of almost pure soluble sulphur and a liquid containing 1-per-cent. colloidal sulphur and up to 6-per-cent. sodium sulphate. By solution of the soluble precipitated sulphur in water a liquid containing 4.58 per cent. of sulphur and 1.48 per cent. of sodium sulphate is obtained, but the greater part of the sulphur is deposited soon afterwards. Solutions containing about 1 per cent. of sulphur and sodium sulphate were more stable, and purer solutions obtained by dialysis are less stable, and when nearly all sodium sulphate was removed only traces of sulphur remained in the liquid, so that it appears that a colloidal solution of sulphur in pure water cannot exist. The solutions of colloidal sulphur are clear, with an astringent taste and smell of hydrogen sulphide. Neutral solutions become turbid in a few hours, but un-neutralised solutions keep well. On boiling the sulphur is deposited in the amorphous form insoluble in carbon bisulphide.

Liquefaction of Helium.—"The Times" states that, in his communication to the Amsterdam Academy concerning the liquefaction of helium, Professor Onnes describes in considerable detail the steps that led up to that achievement, the apparatus employed, and the difficulties that had to be surmounted. In spite of the most elaborate and comprehensive preparation and ample supplies of liquid hydrogen, not only was the whole apparatus, with its subsidiary arrangements, tested to its utmost capacity, but the physical energies of the professor and his assistants were well-nigh exhausted by the prolonged struggle. The constants of helium, while showing some important points of difference, are found to agree very remarkably with the predictions made by Dewar on theoretical grounds in his presidential address to the British Association in 1902. After a correction of two-tenths of a degree the boiling-point of the liquid is found to be 4.5° absolute. By exhaustion to below 1 c., and probably below 7 mm. of pressure, the professor considers that the temperature was reduced to about 3° absolute without affecting the mobility of the liquid. The density of the liquid helium is 0.15, or about double that of liquid hydrogen; and the proportion between the density of the vapour and that of the liquid is as 1 to 11. The critical pressure is in the neighbourhood of two or three atmospheres, which is relatively low in comparison with the figures for other gases. Professor Onnes deduces a critical temperature not much higher than 5° absolute. But with regard to this and all the other figures he says that more careful measurements and calculations must be made before any certain and final conclusion can be reached.



BRUSHMAKERS AT BRIGHTON PAVILION.

The above is from a photograph of Messrs. G. B. Kent & Sons' party after dinner on August 8. See *C. & D.*, August 15, p. 270.

Observations and Reflections.

By "Xrayser."

The Learning

catalogued and classified last week with such callous indifference to the sufferings of those for whom the Educational Number of THE CHEMIST AND DRUGGIST is specially compiled, is bewildering, and in some respects depressing even to mere critics and idle spectators. In view of it the question which has been politically prominent of late, Is it worth while to qualify? is natural and reasonable. It is told of the famous Abernethy that once at St. Bartholomew's, when he faced a theatre full of eager young students, he exclaimed, as if struck with a sudden compassion for them, "God help you! what will become of you all?" Possibly the impromptu had been carefully studied, and anyhow the future of those young men was not the business of the professor except to the extent of doing his best to fit them for it to the best of his ability in the particular line he had undertaken. But it was then and still is the serious business of the students themselves and of their friends to count closely the cost and estimate the prospects of the career they have set before themselves as their probable life's occupation. Perhaps most of those acquainted with the circumstances would incline to the opinion that the cost, in labour, time, and money, of qualifying for pharmacy is greater, and the prospects of success in practising it smaller, than they were a generation or two ago. Both of these propositions are, however, at least arguable.

Modern Qualification

by the way of the college and the examinations is not more arduous, and not in all cases more expensive, than the old seven years' apprenticeship, with its drudgery and monotony, and often with the extravagant premiums associated with it. It would require all the rest of this page to discuss the comparative rewards of competence under the old and present systems, so that part of the discussion must be avoided for the moment. But, disregarding pecuniary considerations, it will hardly be denied that the business of a pharmacist is more attractive in many respects now than it was in the old days. It is true that the preparation of galenicals has to a large extent slipped away from us, but, after all, the delights of triturating mercurial ointment or of mixing and dividing a seven-pound mass of antibilious pills had a tendency to cloy on the operator. Then there have been opportunities of development in several other scientific directions, and, besides, there is always a satisfaction in holding a statutory certificate of competence even if we are, as so many complain, robbed of our title. Still, there remains, to borrow the witty expression used recently by the Prime Minister, "the tranquil consciousness of an effortless superiority." And surely there ought to remain also some actual as well as nominal and merely legal qualification. That is to say, the student who has gone through the prescribed course and assimilated some of it, ought to be somewhat more fit for his work than one who has not so applied himself.

The Standard

set up by the examinations is, no doubt, rather that of traditional pharmacy—of the pharmacy which, as it is considered "by authority," should be, rather than that which actually is. Much of what has been so painfully acquired, in many cases most of it, will never be of any use to the toiling chemist and druggist in his subsequent struggle with fortune. He will never collect his own simples or extract his own alkaloids; and though his customers will ask him many curious questions he will probably

never meet with one who will be inquisitive about the Gallic war. Nevertheless, we shall probably all agree that the several knowledges needed to meet these rare occasions must be included in the education of "the compleat pharmacist," and he would be a Goth indeed who would delete either Latin or botany from the syllabus of pharmaceutical study. It is possible, however, to cling to ancient traditions with undue tenacity, and we may congratulate ourselves that our examination framers are not so conservative as are the administrators of the French pharmacy law. The comprehension of zoology in the French *pharmaciens'* examination, as described by Mr. Birnie-Scott last week, is, I presume, a reminiscence of the days when vipers, toads, and foxes' lungs were prominent items of the *materia medica*.

Rhubarb

is the most interesting word, from a pharmaceutical point of view, which is found in the last published part of the Oxford English Dictionary. No new light on the etymology of the word is furnished, though this can hardly be said to be quite satisfactory. The trouble, such as it is, rests with the first syllable. It was originally "rha," and the change from the early "rhabarbarum" to the modern "rhubarb" is no doubt due, as the Dictionary tells us, to the influence of the Latin *rheum*. Rha was the ancient name of the Volga, and as rhubarb came to Greece by way of the Volga, or rather, perhaps, from the shores of the Caspian Sea, which was the same thing to them, the theory is that the name of the river got transferred to the root. Marcellinus the historian (fifth century), translated by Holland, says: "Near unto this is the river Rha, on the sides whereof groweth a comfortable and holesome root so named good for many uses in physick." Of this origin Murray's Dictionary says simply that "rha" is an obsolete late Latin word for rhubarb, "said to be from Rha, ancient name of the Volga." There are, of course, many instances of the names of districts being used for products got from them, but generally in such cases the product was the special article for which the locality was famous, just as Cognac and Burgundy acquired the names of the districts from whence they are brought. What is rather puzzling, however, is that this "rha," according to the philologists, became *rheon* in Greek and *rheum* in Latin, and subsequently went back from these names to "rha" again, as in the quotation given above. Gerarde (1597) says: "It is called in shops rhabarbarum, in English rubarbe and rewbarbe." Besides the "rha barbarum," ancient Latin writers also describe the "rha ponticum," and Linnaeus tautologically termed the latter *Rheum Rhaponticum*. All would be easy if we might assume, as did the etymologists of old, that the term "rha" was equivalent to "radix."

Passing Comments.

Mr. Walter S. Clark's notes on pharmaceutical arithmetic will be useful to many of us, but that hypothetical examiner of his wants to be taught elementary justice. He is supposed to have asked for the specific gravity of a mixture of olive and castor oils. The answer to his question would be "0.959." But apparently that answer simply would irritate the gentleman, and the candidate would lose some marks because he had not shown in detail how he arrived at his result. Then Mr. Examiner should have asked for what he wanted.

The fall in the imports and exports this year looks formidable, but the "Economist" relieves the alarm which the figures might create by showing that the drop is largely due to a general reduction of prices. The "Index Number" compiled by that authority shows that average values are 15 per cent. lower than this time last year; in other words, that the purchasing power of the sovereign is 15 per cent. higher than it was. This may be true when you are buying a million pounds' worth of things; but the single sovereign seems to take very little notice of the "Economist's" statistics.

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Editorial Comments.

Orangia Ostentation.

It has often been observed that a synchronisation of sentiment occurs throughout the world. Thus while the drug-trade of the United Kingdom is agitated regarding the amendment of the Poisons and Pharmacy Law the German apothekers are similarly troubled. Canada has just enacted a law regulating in some respects the manufacture and sale of proprietary medicines, and events of a like nature in Australia are too recent to require detailed reference. We are not without similar aspirations among medical men at home, and the latest British contribution to the subject is a Bill which has been placed before the Legislative Assembly of the Orange River Colony to regulate the labelling and sale of certain preparations containing poisons and of proprietary medicines, and to impose a duty on the latter. Our correspondent in the Colony declares that the proposals are of Boer origin. The Bill has been prepared by Mr. A. Fischer, the Colonial Secretary at Bloemfontein. It is not surprising that the chemists in the Colony regard the proposals with alarm, for the Bill exhibits ignorance or indifference to the conditions of trading, and imposes regulations which will result in hardship to all who have to conform to them and inconvenience to the public. The Bill consists of eight clauses, the first comprising the following definitions:

"Medicine" shall mean any preparation of any kind prepared or purporting to be prepared for use or application externally or internally as a medicine or medicament for the prevention, cure, or relief of any complaint or disorder incident to or in any wise affecting the human body.

"Proprietary Medicine" shall mean any medicine with the exception (a) of medicines dispensed or supplied by or on the written order or prescription of a registered medical practitioner or of a registered dentist in the exercise of his profession; and (b) of drugs and preparations named or contained in the British Pharmacopoeia, and any other medicinal drug prepared or sold or offered or exposed for sale without any mixture or composition with any drug, preparation or ingredient other than some necessary or customary medium or excipient for the conveyance or satisfactory administration of the same, provided that in such cases, unless the pharmacopoeial or medicinal name of such preparation or drug or the name by which the same is customarily known appear on the label thereof, the same shall be deemed a proprietary medicine.

It is obvious that the definition of "proprietary medicine" includes all compound medicines which are not pharmacopoeial—for example, Sir Andrew Clark's liver pills, the Board of Health diarrhoea mixture, and Dutch medicines which are not simple tinctures or solutions, or simple

drugs. The definition is ridiculously wide, and is calculated to do more harm than good. Moreover, by a subsequent clause these non-pharmacopœial medicines must be stamped and labelled in a special manner—which also is ridiculous. The second clause of the Bill deals with medicines containing poisons, and proposes that no medicine or preparation of any kind containing any of the poisons scheduled in the Colony shall be sold, dispensed, or supplied (on prescription or otherwise) unless it is labelled with the words

“POISON” and “VERGIF”

in letters such as we print these words in. In the case of powders not exceeding 1 dr., enclosed in papers, the label is to be affixed to the box or package in which all the powders are contained, and in other instances the receptacle immediately containing the medicine or preparation is to bear the label. The penalty for contravention is a fine not exceeding 10*l.*, or imprisonment with hard labour for not more than two months. This also is an undigested proposal, and medical practitioners, dentists, and veterinary practitioners, whose prescribed medicines will come under the requirement, should join with chemists in opposing the Bill. No country in the world that we know of requires internal medicines prescribed by physicians, and containing medicinal doses of poisons, to be labelled in this manner. The third clause of the Bill proposes that proprietary medicines must bear a label specifying the ingredients which they contain. The exact words of the clause are :

From and after the first day of July 1909 every bottle, vessel, box, wrapper, package, or other receptacle immediately containing any proprietary medicine shall have properly and securely pasted, stuck, or affixed thereto a label on which shall be printed or written the name and proportion of every ingredient contained in such proprietary medicine, provided that in the case of powders enclosed, as in the last preceding section mentioned, it shall be sufficient if such label be so affixed to the box or package containing the same.

The penalty for selling, offering, or exposing for sale, or keeping in stock for sale any medicine contrary to this provision will be a fine not exceeding 10*l.*, or not more than a month's hard labour. An exception is provided in Clause 4 for any medicine patented in the Colony or composed strictly in accordance with a specification filed with the Registrar of Deeds, setting forth the name and preparation of every ingredient of the medicine. The specification is to bear a 20*l.* Revenue stamp, and provision is made for keeping it secret, the only persons to whom the Registrar may reveal the contents being the Medical Officer of Health for the Colony and the Government Analyst, or any police officer or law officer. The medicines which are patented or registered in the manner described must bear a label stating distinctly that they are registered, and the registration number must be shown in each case. If any preparation contains a scheduled poison the name and proportion of it must also be put on the label. Provision is made for altering the ingredients in the specification on a payment of 5*l.* A penalty not exceeding 20*l.*, or six months' hard labour, is to be imposed on any person who sells, or offers or exposes for sale as patented or registered any medicine which is not so. The proposal as regards naming poisons and the quantity of them in proprietary medicines was first heard of a few months after the Colonial Ordinance of 1904 came into force, medical members of the Council then wanting this done, and it was actually accomplished in 1905 in respect to preparations containing opium, morphine, and strychnine, and preparations of arsenic for internal use. This

principle is to be extended to all scheduled poisons, which include specified patent and Dutch medicines, among them Ayer's Cherry Pectoral, Atkinson's Infants' Preservative, Bow's Liniment, Chamberlin's Colic Remedy, Crosby's Elixir, Fellows' Syrup, Kay's Essence of Linseed, Powell's Balsam of Aniseed, Winslow's Soothing Syrup, and chlorodyne (all makers).

A 3*d.* Revenue stamp is by Clause 5 of the Bill to be affixed to all proprietary medicines sold, offered, or exposed for sale within the Colony after January 1, 1909. A penalty not exceeding 5*l.*, or one month's imprisonment, is to be imposed for infringement, and it extends to any person purchasing an unstamped proprietary medicine. Clause 6 is substantially the “Known, Admitted, and Approved Remedies' Exemption” of Great Britain in the Act of 1812, but it is more modern in its terms than the exemption which chemists in Great Britain enjoy. It is as follows :

Nothing in the last preceding section contained shall apply to any medicine sold or offered or exposed for sale by retail by any registered chemist and druggist on or from his own premises, which medicine has been compounded or prepared by himself, and in respect of which he claims no occult or secret art nor any exclusive right or title for the preparation thereof, and which he does not at any time by any public notice or advertisement or by any written or printed papers, handbills, or labels or words printed or affixed to or delivered therewith, hold out or recommend as a nostrum or specific or beneficial for the prevention, cure, or relief of any complaint, ailment, or disorder incident to or in any wise affecting the human body.

Clause 7 makes it an offence to supply or deliver with any proprietary medicine handbills or printed matter concerning it or the ingredients wherein the statements are false or calculated to deceive the public as to the nature or effect of the medicine or ingredients. Penalty for infringement, a fine not exceeding 10*l.*, or imprisonment with hard labour for not more than six months. The Bill is an attempt to gratify the aspirations of a section of medical men in the Colony, since it is, in short, an effort to compel the public to get medical treatment from professional men, or to confine their self-treatment to preparations in the British Pharmacopœia, or ordinary simples. If, as our information states, the Bill is to be passed unamended, we trust efforts will be made to get the Governor to veto it.

Census of Production.

IN our issue of January 12, 1907 (p. 51), we published full particulars of the Census of Production Act, 1906, by which the Board of Trade is empowered to take a census of the quantity and value of articles produced this year by every employer who owns a factory, workshop, quarry, or mine in the United Kingdom, and now the first of the schedules dealing with the chemical and drug trades, which were referred to in our issue of November 2, 1907, has been circulated to all manufacturers of heavy chemicals. The schedule and the accompanying instructions have, as stated last November, been prepared after consultation with important and representative firms in the heavy chemical industry. The information required will, of course, be treated as strictly confidential, and will be used solely in compiling general statistics as to the production of commodities in the United Kingdom. Ten questions are submitted, and to seven at least answers must be given, the other three (which doubtless have been suggested by manufacturers themselves) being voluntary. Question I. deals broadly with the nature of the trade or business; II. deals with the year of return—which should as a rule be in respect to 1907, but if necessary the particulars may be for the financial year June 30, 1907, to June 30, 1908; III. is the most important, and relates to output, full instructions

being given as to the manner in which the information is to be supplied, the following being the articles for which a return of the quantities (tons and cwt.) and net selling values is requested:

Acetic acid, aluminous sulphates (including alum), carbonate, muriate, and sulphate of ammonia, arsenic and its oxides, bleaching-powder and other bleaching materials, borax, carbide of calcium, chromates and bichromates of soda and potash, copper sulphate, potassium and sodium cyanide, disinfectants, insecticides, weed-killers, sheep and cattle dressings, crude and distilled glycerin, hydrochloric, nitric, and sulphuric acids, British-prepared saltpetre, soda compounds (excluding chromates, cyanides, borax, and salt), sulphur and sulphuric acid, cream of tartar, tartaric acid, and unenumerated chemicals (not including coal-tar products, dyestuffs, manures, medicines, or salt). All other products (specify principal kinds and values separately).

The list is based chiefly on the Import and Export Customs Bill of Entry, but should any other business, such as tar-distilling, manufacture of artificial manures, or soap-making, be carried on at the establishment to which the schedule is sent, application should be made to the Census of Production Office for an appropriate supplementary schedule. In stating the output it is necessary to include not only the goods made and sold in the year of return, but also those made in the year and the stock at the end of the year. In order to ensure accuracy it is necessary that discrimination should be used in regard to partly manufactured and finished products, so that they may not be included twice over. For example, a manufacturer makes 100 tons of sulphuric acid, and uses 80 tons of it in making, say, artificial manure, and sells 20 tons of the acid as such. In the return the output of sulphuric acid will be put at 20 tons. In order to arrive at the net selling value, specific instructions are given that the cost of cartage and delivery by the firm's own staff and the salaries and expenses of travellers solely employed by the firm are not to be deducted. Deductions may include discounts, and an estimate of all out-of-pocket expenditure for freight, cartage, and agency. Packing-cases, etc., where returnable, are not to be included in the value of the goods, and the value of the products in stock at the end of the year should be estimated as closely as possible on the basis of the ruling market-prices. All goods made by the firm and not already specified in the form must appear under the heading "All Other Products," and where a firm makes its own barrels, boxes, etc., the value of which is not included in the value of the goods (*e.g.*, returnable cases made in the year and those in stock), this is to be entered here. There is also a heading for "Construction and Repair Work," under which is to be included the cost of construction, maintenance, and repair carried out by the firm's own workpeople on its own buildings, plant, and machinery. Works defrayed out of revenue are to be included, as well as those charged to capital account, the cost to be stated being the cost of labour and materials.

In order to ascertain the net value of the production in the United Kingdom, manufacturers are required to estimate the aggregate cost of purchased materials and stores (Question IV.), which figures will ultimately be deducted from the output as given in the previous question. All raw materials worked up or used are to be included, such as salt, sulphur, pyrites, acids, metals, fuel, gas, electric current, oil, waste, tools, stores, packing-materials, non-returnable cases, and all materials used by the firm's workpeople in repairs or construction. Machinery and plant bought or made in the year must not be included as "materials," nor is any entry to be made for depreciation. Materials in hand at the beginning of the year and used during the year are to be taken at the amount at which they stood in the firm's books at the beginning of the year; the value of "materials" in stock at the end of the year of

return is not to be included. A return has also to be made of the number of persons employed (Question V.), this including wage-earners and salaried persons; while under Question VI. the number of calendar days on which an establishment is open for production must be shown, as must also the average percentage of wage-earners at work on Sundays. Question VII., the last of those which are compulsory, deals with (a) capacity of engines owned, and (b) amount of electricity used. Under the heading of "Voluntary Information" three questions are asked which have met with the approval of leading firms in the trade. They are as follows:

8. Amount of salt decomposed in year of return.
9. Total make of hydrochloric, nitric, and sulphuric acids.
10. The amount of fuel consumed.

The last question is asked at the request of many manufacturers in all trades. The general directions as to answering the questions are explicit, and it may be taken for granted that manufacturers will reply to them according to their individual knowledge and belief. It is requested that the schedule should be filled up and returned as early as possible within the next three months. The schedules relating to the manufacture of fine chemicals and the drug-trade are now in the press, and will be issued shortly.

Decimal Dispensing.

ALTHOUGH it is highly improbable that a Bill for the compulsory adoption of the metric system will be introduced into the House of Commons next Session, the Decimal Association is now endeavouring, with some success, to influence the medical profession on behalf of the principles they espouse. The approval by the British Medical Association of the introduction of the metric system in writing prescriptions has already been mentioned (*C. & D.*, August 1, p. 208), and it is interesting to note in that connection that a printed statement was issued to the members of the Association, which endeavoured to show how simple the metric system is. We quote the more practical observations from this, and show in what respects it is open to criticism:

1. All substances, both solids and liquids, are weighed.
2. The unit of weight has a simple equivalent in the unit of measure. 1 cubic centimetre (c.c.) of water at 4° C. weighs 1 gram. (N.B.—For practical prescribing, the expansion of water above and below this temperature can be neglected.)
3. 1 grain is equivalent to 0.0648 grams, *i.e.* 6.5 centigrams in round figures. 1 minim is equivalent to 0.059 c.c.—*i.e.*, nearly 6 centigrams of water.
4. While the gram and meter are the units of weight and length, special terms are employed for certain multiples of these two:

1,000 grams = 1 kilogram (or kilo.).
1,000 c.c. = 1 litre.

An example of the ease with which a prescription can be translated from the old system into the metric system will demonstrate that the practitioner of to-day need not be afraid of the introduction of the decimal system.

Take the following prescription:

Liq. arsenicalis	...	...	...	mxxxvj.
Pot. bicarb.	...	...	...	dr. jss.
Pot. iodid.	...	...	...	dr. j.
Spr. chloroform.	...	...	...	fl. dr. j.
Inf. gent. ad	...	...	...	ʒvj.

No. ft. mist.

Sig.: One tablespoonful to be taken three times a day, after meals.

The metric value of each ingredient would be calculated as follows:

	gram.
10 doses of 3 minims, or 0.18 gram	= 1.8
10 doses of 7½ grains, or 0.48 gram	= 5.0 (approx.)
10 doses of 5 grains, or 0.325 gram	= 3.25
10 doses of 5 minims, or 0.295 gram	= 3.0

The prescription would then be written thus:

		gram.
R.	Liq. arsenicalis ...	1.8
	Pot. bicarb. ...	5.0
	Pot. iodid. ...	3.25
	Spr. chlorof. ...	3.0
	Inf. gent. ...	200.0

No. ft. Mist.

Sig.: One-tenth part to be taken, etc. etc.

If it is required to use the household measures of tea- or table-spoon, the equivalent in the metric system is $\frac{3}{4}$ and 15 c.c. respectively.

Tinctures are, with few exceptions, 1 per cent. solutions or extracts in alcohol. This means that 1 gram of solid is dissolved in 100 grams of solution. By using this system the corresponding dose of the solid is seen at a glance, while under the existing conditions this is not at once clear.

If the foregoing may be taken as evidence of the grounds upon which the members of the British Medical Association resolved to support the metric system, we venture to say that they did not consider the matter fully, and ignored several important practices which must be stopped if their resolution is given effect to. Thus it is no part of the metric system as applied to medicine to weigh liquids as well as solids; that is rather a national idiosyncrasy to which British pharmacists and physicians are averse. The second rule ignores the material factor—density. The specific gravities of many pharmaceutical preparations differ considerably from that of water—*e.g.*, syr. ferri iodidi—so that ten doses of 10 minims would not weigh 6.0, according to above schedule, but about 8.3 grams; and in the example given for spt. chlorof. (s.g. 0.871) it should be 2.61 grams, not 3.0 grams, as stated. There are other inaccuracies in the B.M.A. statement. Tinctures are not “1 per cent. solutions or extracts in alcohol,” but weight in volume preparations of varied proportional strengths but of systematised dosages. It is pitiful that a statement issued under the ægis of the British Medical Association should show ignorance of the latter peculiarity of B.P. tinctures which were devised by the General Medical Council for the convenience of prescribers. There is, however, other internal evidence in the statement of haste and immature consideration—*e.g.*, the occurrence of “No. ft. mist.” twice for “M. ft. mist.” We are told that “the medical profession, a profession of scientists, should lead the way” in introducing the metric system into England. We pray for more enlightened leaders than these, and would remind our readers that the metric system is introduced and its use legalised, so that there is nothing to hinder medical practitioners from adopting it. No fresh legislation is necessary.

Shop and Soap Taxes.

As a supplement to the remarks on this subject by “Xrayser” (*C. & D.*, August 15, p. 263), we may mention that the revival of this tax has been seriously discussed in the “Revenue Review” by Mr. Colemere Wood, who said:

A general tax on shops was proposed as early as 1759. It was admitted then that the tax to be just should be levied in proportion to the extent of the business. This, however, would have involved an intolerable inquisition into the affairs of shopkeepers; and as a uniform tax at a fixed rate would have crushed the “small men,” the proposal was dropped.

Subsequently Pitt, who suffered greatly from gout,

“And that eternal want of pence
Which vexes public men,”

revived the proposal, and imposed a general tax on shops, not according to the extent of trade, but according to the annual value of the premises, the rate of duty rising from 6d. in the pound on small shops up to 2s. in the pound on large. The London traders, upon whom the tax fell heavily, protested vigorously against it on the ground that it was unjust and oppressive, especially to them. After a series of stubborn struggles in the Commons, Pitt, though unconvinced, at length

gave way; and the tax was repealed in 1789, having been in operation four years.

A general tax on shops, though it is certainly not free from defects, possesses several advantages. Undoubtedly the most exact basis would be the volume of trade; but the expense, difficulty, and friction involved in correctly ascertaining the volume of trade would be prohibitive, and the best substitute appears to be the annual value of the premises. If the rate of duty is kept low, any inequality of incidence would not be serious. The tax could be easily assessed and easily collected. The machinery for both assessment and collection is in existence, and could be strengthened as far as necessary without difficulty or much additional expense. Moreover, the tax would admit of adjustment, so that a larger or smaller sum might be obtained by slightly raising or lowering the rate of duty according to the circumstances of the time, and it would not interfere with any process of manufacture, or hamper free exportation, which is the correlative of free importation.

The principle of a shop tax—or a tax on sales—is embedded in our fiscal legislation, and its extension to all shops is only a question of expediency. A tax of 6d. in the pound in respect of the annual value would probably yield nearly 2,000,000l.; but that, after all, is not equal to a penny on the income-tax; and the income-tax payer is more patient and long-suffering than the shopkeeper. Which thing is a variable.

This inside view of the matter is interesting, especially as the remarks were made in considering the subject of broadening the basis of taxation. Revenue officers are not without their views on that subject, but statesmen, whether Protectionists or Free-traders, are singularly unsympathetic to proposals for the revival of what we may call petty taxes. Another of the kind which Mr. Wood referred to was the tax on soap, as to which he said:

In 1852 a tax of 1½d. per lb. on hard soap and 1d. on soft yielded over 1,100,000l. Ireland was exempt, possibly because Irish water, like the Irish accent, was so delightfully soft and ungumy that soap was superfluous. A wicked philologist has said that the Irish tongue will lather you, while the Scottish tongue will shave you. Howsoever these things be, at the present day a halfpenny a pound on common soap, with an additional penny on “fancy” and toilet soap, is estimated to produce over 2,000,000l. This is a tempting bait. The profits on “fancy” soaps must be enormous; even the cost of advertising them equals the income of a German Principality or an American millionaire. When the financial reformer contemplates such a mine of wealth lying open before him he must sigh that he cannot dig its gold. But the mine was closed for very good reasons, among them being (1) the frauds entailed by the necessary system of drawbacks incident to the use of soap in our manufactures; (2) the injurious effects of the tax on the comfort and health of the people; (3) the ruin it caused to our export trade; and (4) the prospect of a great increase in production and a larger trade in palm oil with the coast of Africa.

The march of civilisation has not affected the validity of the first two reasons; they are still sound and applicable to the taxation of soap employed in manufactures or used by the cleanly and careful housewife. “Fancy” soaps, however—those that breathe of Capuan odours and shine with splendid names, that beautify the complexion and give the softness and smoothness of youth to the wrinkled face of age, that bring joy to the world and wealth to their makers—stand on a different footing; and if they could be taxed without touching the common kind, we believe a handsome contribution to the Revenue would result.

These remarks were made before the First Lord of the Treasury introduced his last Budget, and—they were ignored.

Arylarsonates.

We are indebted to several subscribers for cuttings of an article which appeared in the “Morning Leader” of August 17, wherein Mr. Spencer Leigh Hughes, the writer of “Sub Rosa,” expends some of his sparkling wit upon the Wellcome Research Laboratories. His article embodies such remarks as the following:

The reader is first of all introduced to bromodihydroum-bellulone, and then to its near relation dibromodihydroum-bellulone. The first has twenty-three letters and the second twenty-five letters, and each is long enough to satisfy a

reasonable man, but they are mere trifles put at the outset to prepare the weaker brethren for what is to follow. And before long we are asked to face this little pet name, dibenzoylamino-tetrahydroumbellulylamine. Here we have a word of thirty-nine letters—as many letters as the Church has articles, equalling in number the stripes of the Apostle, forty save one.

Mr. Hughes is not a chemist, otherwise he would know that these long names are most expressive, since they tell exactly what the substances are. Other daily papers have been commenting upon the work of the Wellcome laboratories, but we question if the lay Press is in a position to appreciate the value of the work which has been done there. A striking example is afforded in the research on arylarsonates by Pyman and Reynolds, communicated to the Chemical Society, and published in *C. & D.*, June 13, p. 903, which has quickly borne fruit in so far as it has produced a new medicine—sodium para-aminophenylarsonate, or “soamin.” Colonel F. J. Lambkin, R.A.M.C., read to a Section of the British Medical Association at Sheffield a paper on the treatment of syphilis with this substance, which replaced atoxyl in experiments at the Military Hospital in London. The paper is published in the “British Medical Journal,” August 15. Without going into the clinical details, we quote the remarks by Colonel Lambkin which directly interest dispensers of medicine:

“Soamin” contains 22.8 per cent. of arsenic, equivalent to 30.1 per cent. of arsenious acid. It is soluble in five parts of cold water, giving a bright neutral solution which can be sterilised. It is incompatible with acids and solutions of heavy metals or of quinine. Its toxicity is less than one-fortieth that of arsenious acid. Since November 1, 1907, I have used this preparation, and have no hesitation in saying that it is preferable to “atoxyl”: it appears to have more rapid effects on syphilis than the latter, and there is no reason to think otherwise than that it is a safe preparation. Beginning with doses of 3 grains every third day I gradually raised it to what I have at present stopped at—that is, 10 grains every other day until a total of 100 grains has been given. The arylarsonate salts should not be given by the mouth, as they are broken up by the acid-contents of the stomach, and the effects of over-treatment by arsenic are thus more easily produced. It is advisable that the solution should be prepared freshly before use, as if kept it is apt to become decomposed. It is given by intramuscular or subcutaneous injection. The usual steps to ensure strict antiseptis must be taken, using boiling oil or the latter raised to at least 160° to sterilise the syringe and needle; under no circumstance should an acid be used for this purpose, as acids decompose these salts. Before injecting the solution it should be heated to body heat.

Owing to the fact that the great bulk of chemical research in this country is of an academic nature, it rarely happens that the outcomes of it are directly applied industrially. It is different in Germany, which during the past twenty years or more has thrown into *materia medica* a number of highly valuable products which have emanated from industrial research laboratories. The arylarsonates are an instance of a valuable product produced in a British laboratory of that kind, and are notable in this regard.

Cascara Sagrada and Rhubarb.

IN continuation of the examination of *rhamnus frangula* and *purshiana* by A. Tschirch and J. F. A. Pool (“*Archiv der Pharmazie*,” 246, 5), it is reported that the coarsely powdered bark was percolated consecutively with 70 per cent. and 90 per cent. alcohol. The percolates were concentrated at a temperature not exceeding 70° to 80° C., and after thinning with water, agitated in separate portions with ether. From the ethereal solutions a red-brown residue, completely soluble in sodium-hydroxide solution, was obtained, and the precipitate produced by the addition of hydrochloric acid to this alkaline solution was treated as formerly described for *frangula*-bark. From the precipitate obtained on mixing the toulou solution with petroleum ether only

emodin (m.p. 225°) could be isolated, and no rhein separated from the concentrated solution from the residue extracted with boiling pyridin. The analysis of the cascara emodin (dried at 140°) corresponded with the formula $C_{15}H_{10}O_5$, identical with that of *frangula* emodin. The triacetyl and trimethyl ether derivatives were prepared, and the melting-point of the acetyl derivatives was 192° to 194°, and of the trimethyl ether 225° C., which, in conjunction with the melting-point of 225° for the emodin itself, shows the identity of the two emodins. The authors studied the influence of magnesia on the percolation of *rhamnus*-barks and *rhubarb*-root. Five grams of the powdered drug was well mixed with 0.250 gram of magnesia, and extracted with a mixture of equal parts 10-per-cent. alcohol and water until the percolate was free from colour. The percolate was made up to 400 c.c. and shaken out with quantities of 100 c.c. of ether until the separated ether was no longer coloured red on shaking with dilute potash solution. The united ethereal extracts were shaken with 100 c.c. of 5-per-cent. potash solution, and the operation repeated with portions of 50 c.c. each until the solution did not become red in colour. In the bulked alkali solutions the oxymethylantraquinone was determined colorimetrically by using a nickel solution. The liquid from the ether extraction was freed from ether and boiled with 5-per-cent. sulphuric acid, and the oxymethylantraquinones determined as above. The amount of free and combined oxymethylantraquinone was determined under similar conditions in 5 grams of drug exhausted by percolation without admixture with magnesia. The results were:

Extract of Drug Prepared without Magnesia.

Frangula Bark.	Free oxymethylantraquinone, 1.40; combined, 1.84; total, 3.24.
Cascara Bark.	Free oxymethylantraquinone, 0.06; combined, 0.20; total, 0.80.
Rhubarb Root.	Free oxymethylantraquinone, 1.10; combined, 2.47; total, 3.57.

Extract of Drug Prepared with Magnesia.

Frangula Bark.	Free oxymethylantraquinone, 0.75; combined, 2.24; total, 2.99.
Cascara Bark.	Free oxymethylantraquinone, 0.18; combined, 0.50; total, 0.68.
Rhubarb Root.	Free oxymethylantraquinone, 0.43; combined, 2.53; total, 2.96.

The above figures show that, although the total amount of oxymethylantraquinone in the extract is not influenced greatly by the presence of magnesia, the amount of combined oxymethylantraquinone is increased, owing to the combination of the original anthraglucosides and the oxymethylantraquinones with the magnesia and extractive matter. Why the activity of the extract, which, according to Tschirch, depends less upon the free than the combined oxymethylantraquinones, is not diminished when magnesia is added to deprive it of its bitter taste is explained by these results.

Electrolytic v. Carbolic Disinfectants.

The report of the medical officer of health for Poplar (Dr. F. W. Alexander) states that 32,586 gals. of electrolytic disinfectant fluid were manufactured during the two years ending January 31, at an inclusive cost of 1,009/. The estimated cost of 2,015/. for carbolic-acid disinfectants for the same period, based upon the amount used in 1905, is contrasted with the cost of the electrolytic disinfectant, and shows, according to the figures, a saving to the borough of 1,006/., or an excess over the total cost of the plant of 398/.. However, the actual profit is difficult to deduce from the report, since during the stated period 60/. due for rent is not included, 186/. was saved by ceasing the supply free bottles, while economy has been practised in reducing

wages, the number of depôts open, and the amount paid for cartage. These items detract from the above apparent saving. Similarly from the complicated report it is difficult to arrive at a true estimate of the carbolic disinfectants consumed by those now using electrolytic disinfectants. The estimated supply of carbolic disinfectant for Guardians' institutions and the sick asylums is given for sixteen months only, based upon the year 1905, so a true statement should increase the saving for the borough, while the Public Health Department is given for the full two years. The year 1905 was a record one in carbolic-disinfectant consumption, the cost being for the Public Health Departments alone 143*l*. (for the two years 286*l*.) above the average of the previous two years. Particulars are also required as to the bactericidal efficacy of the two disinfectants before a true comparison of real saving or otherwise can be made

British Pharmaceutical Conference.

We have received from Mr. E. Saville Peck, M.A., Senior Hon. Secretary of the Conference, the following list of titles of papers which are to be read at the meeting in Aberdeen on September 15 and 16:

The Strychnine Standard for Preparations of Nux Vomica.
The Characters of Official Iron Arsenate and the Preparation of a Soluble Ferric Arsenate.
Aletris Farinosa.
Notes on some B.P.C. Formulæ.
Tasteless Liquid Extract of Cascara Sagrada.
Commercial Pil. Hydrarg.
Note on Formic Acid and some Formates.
Valenta's Test for Oils.
Lead Plaster and Litharge.
Paraffin Ointment.
Phases of Pharmacy in Scotland—an Historical Sketch.
Scammony and Jalap Resins.
Commercial Ethers.
The Alcohol Solubility of Resin of Podophyllin.
Some Powdered Drugs.
The Seeds of *Garcia Nutans*.
Determination of Mercury in Ung. Hydrarg.

We understand that fuller particulars will be supplied to us later. Authors of papers should send in their manuscripts not later than September 1.

Prescription Problem.

Day 30 of
No. 6. *Ph- (Conductors)*
JAN 30 1908
By chemist as 30f
Li Lu

We shall be glad to receive postcard renderings of the above prescription not later than Friday, August 28. The prizes offered are three copies of "The Chemist-Optician," (1) Metropolitan, (2) Provincial, (3) Continental, Irish, and Scotch. The Editor's award to be final.

The prescription given in our issue of August 8 was Irish in origin, and read:

R Malt Ext
and case ... 38
(Trom)

Sig. $\frac{1}{16}$ par t.d.

We agree with "Xrayser's" remarks on the illegibility of

this prescription, and the following efforts at interpreting it indicate how serious is the risk the patients run when their medical attendants do not write distinctly:

R Foveti Ext Maltine (Trom.) ... 38
Sig. $\frac{1}{16}$ qtor. i. d.
R Pot Citr ... 3ss.
Aqua dest ... 58
Misce.
Sig.: $\frac{1}{16}$ given 4 (times a day).
R Malt Ext and iron (Trom:) ... 38
Sig. $\frac{1}{16}$ part t.d.
R Pot. Citr. ... g. XL.
Mist. Tussi (Truman) ... 38
Sig. $\frac{1}{16}$ p.r.n.

Two competitors sent in correct solutions of the scrip—viz., Mr. H. K. Jones, 139 Granby Street, Liverpool, and Mr. A. E. Adams, c/o Boots, Ltd., Worcester, to whom book-prizes are awarded.

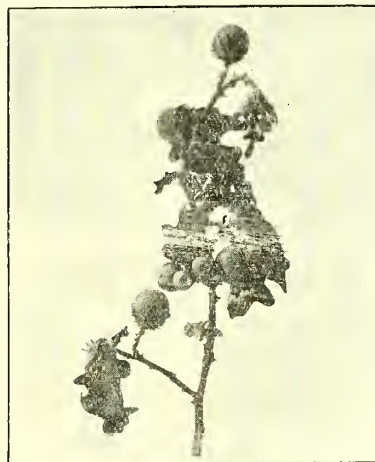
South African Plants.

Notes on those of Medicinal Interest.

By G. E. Oliver.

SOLANUM SODOMEUM (Kaffir, *um-Tuma*).

THIS formidable-looking plant is a common weed on cultivated ground, rubbish-heaps, and near cattle kraals, frequently disputing the situation with stramonium, or



SOLANUM SODOMEUM.

stink-blaad, as it is known by the Dutch. The whole plant, which, in favourable situations, grows 5 to 6 ft. high, is well armed with spines, the leaves are divided, and the flowers typical of the order *Solanaceæ*, being whitish or purple with a yellow central column of joined anthers. The parts used medicinally are the fruit (apple of Sodom), which, when ripe, is a large pale yellow berry, averaging an inch in diameter, and the leaves. The drug is for destroying parasites, and is employed for itch, ringworm, etc., and was formerly used for scab in sheep. The juice of the fruit is extremely acrid and bitter, and a drop squirted accidentally into the eye caused great pain and inflammation, but did not produce dilation of the pupil. The juice contains solanine.

PROPRIETARY MEDICINES IN AUSTRALIA.—The report of the delegates, Messrs. E. Glover and J. A. Kenningham, on their visit to Australia and New Zealand on behalf of the "Owners of Proprietary Articles Sub-Section" of the London Chamber of Commerce, is being sent to members this week. It narrates the incidents of the delegates' work in Australia and New Zealand, and confidently anticipates that any legislation on the subject will be less partial than what has hitherto been proposed, and many friends will see that proprietors' interests will be guarded.

Practical Notes and Formulae.

Formulae from the Swiss Pharmacopœia.

Cinchona-wine.

Liquid extract of cinchona (6 per cent. of alkaloids) ...	30 parts
Dilute alcohol ...	20 parts
Cows' milk ...	40 parts
Malaga wine ...	910 parts
Citric acid ...	1 part

Mix the wine, liquid extract of cinchona, dilute alcohol, and milk, and allow to rest in a cool place for eight hours; then filter at a low temperature, and add the citric acid. Store in a cool place, and filter a second time if necessary.

Coca-wine.

Liquid extract of coca ...	50 parts
White gelatin ...	0.5 part
Water ...	5 parts
Marsala wine ...	945 parts

Dissolve the gelatin in the water by means of heat, mix the warm solution with the wine, and add the liquid extract. After standing for several days, filter.

Sodium and Theobromine Salicylate.

Theobromine ...	18 parts
Caustic-soda solution (sp. gr. 1.33) ...	13.4 parts
Sodium salicylate ...	16 parts
Water ...	a sufficiency

Dissolve the theobromine in the caustic-soda solution and 20 parts of water by the heat of a water-bath; then add the salicylate of soda dissolved in 32 parts of water. If necessary, filter the solution through asbestos, and evaporate quickly in small quantities at a time. Powder the solid that results, and dry.

Syrup of Marshmallow.

Marshmallow root ...	50 parts
Alcohol ...	30 parts
Sugar ...	650 parts
Water ...	a sufficiency

Wash the marshmallow root in cold water and macerate, with frequent shaking, for three hours, in a mixture of alcohol 30 parts, water 400 parts, and strain without pressing. Heat the strained liquid to the boiling-point, and filter while warm. In 350 parts of the filtered liquid dissolve the sugar, heating to the boiling-point.

Tar-syrup with Codeine.

Tar-water ...	324 parts
Sugar ...	505 parts
Glycerin ...	150 parts
Codeine ...	1 part
Alcohol (68-69 per cent.) ...	20 parts

Dissolve the sugar in the tar-water by heat; add the glycerin, and, when cold, the codeine dissolved in the alcohol.

Tar-water.

Tar ...	1 part
Pumice stone ...	3 parts
Water ...	10 parts

Shake together for five minutes, then filter.

Zinc Sulphocarbonate.

Phenol ...	100 parts
Sulphuric acid ...	120 parts
Barium carbonate ...	a sufficiency
Zinc sulphate ...	a sufficiency
Water ...	a sufficiency

Mix in a flask the phenol and sulphuric acid; lightly cork, and keep at a temperature not exceeding 60° C. for a week. Then carefully pour the mixture into 2,500 parts of water and neutralise with sufficient barium carbonate. Warm on a water-bath, and filter. While the liquid is still warm add sufficient zinc-sulphate solution to precipitate the barium, filter, wash the filter with water, evaporate, and crystallise. Dry the crystals at ordinary temperature.

Iodotannic Solution.

THE following formula is given for iodotannic solution from which can be readily prepared iodotannic syrup or wine:

Dissolve 10 grams of powdered iodine in 90 grams of 90-per-cent. alcohol in a mortar. Separately dissolve with gentle heat 20 grams of tannic acid in 180 grams of glycerin. Mix the two solutions (while the latter is still warm), and, after a few hours, filter.

To make iodotannic syrup mix 30 grams of this solution with 1,200 grams of syrup and flavour with peppermint,

lemon, or orange. To make iodotannic wine mix 30 grams with 1,000 c.c. of Muscat wine or similar wine with a 15-per-cent. alcohol content.

Medical Gleanings.

Dr. Pagan's Pill.

ACCORDING to "The Prescriber" (1908, 155), the formula for this pill, well known in the West of Scotland, is:

Ext. coloc. co. ...	3ij.
Ext. jalapæ, ...	
Pil. rhei ...	aa. 3ij.
Pulv. scammon., ...	
Pulv. aromat. ...	aa. gr. viij.
Ext. hyoscyam., ...	
Sapo. hispan. ...	aa. gr. xvj.

Divide in pilulas xxiv.

An Ointment Diluter

made by Mr. Martindale, at the suggestion of Mr. Charles Wray, F.R.C.S., of Croydon, consists of a hollow cylinder marked off in equal parts and fitted with a glass piston. To dilute an ointment, say one in four, the instrument is put into the pot of diluent base and contents drawn up to 3, then into the unguent and drawn up to 4, the expelled contents being mixed on ointment pot lid with the glass piston. Lotions are similarly diluted by placing, on the lotion cap, a metal disc perforated in the centre. It is intended to be used when various patches of disease require applications of different strengths.

Breast Liniment.

A CORRESPONDENT of the "Prescriber" (August 1, p. 155) recommends the following application for the dispersion of a benign tumour in the external breast:

Tinct. iodi ...	3ij.
Linim. saponis ad ...	3ij.

Misce.

Shake the bottle, and then rub breast between nipple and base of mamma, backwards and forwards, twice daily. Cover with flannel or Gamgee tissue.

Magnesium Sulphate in Erysipelas.

DR. HENRY TUCKER ("Therap. Gaz.," June 15, p. 381) has applied the method of treating inflammation with saturated solution of magnesium sulphate to cases of erysipelas. The technique in facial cases consists in the application of fifteen to twenty thicknesses of ordinary gauze over the area involved, one aperture only being made to permit breathing. The mask is saturated with the solution, covered with oiled silk or wax-paper, and kept wet by applying more solution as required. The dressing is removed not oftener than every twelve hours to ascertain progress and reapplied immediately. The infected area is not washed during treatment. In thirty-five uncomplicated but severe cases, with milk diet until normal temperature was attained, all recovered in from two to seven days, and relief from pain was given in a few hours. No internal or so-called specific treatment was given.

Defence from Disease.

SIR W. WATSON CHELSE, in the Wightman Lecture "On the Defensive Arrangements of the Body as Illustrated by the Incidence of Disease in Children and Adults," mentions among other means of defence the question of suitable *pabulum*. As instances the case of "ringworm of the scalp" and the "common threadworm" are mentioned, after a consideration of the desiderata for the spread of epithelial cancer and the growth of tubercle bacilli and gonococci *in vitro*. Ringworm may affect children of all ages, but is rarely noticed before three or after fourteen years of age; it never appears after the age of fifteen, and is not infective to adults. At puberty the disease spontaneously disappears, and fresh, healthy hairs appear on the affected site, showing that although the fungus grows close to the roots, it does not destroy the hair bulbs. Threadworm is far more frequent in children than in adults. Whatever the explanation may be of this varying susceptibility, the author considers the suitability or otherwise of the food which the parasite finds in the part it invades must not be overlooked.

Advertising Ideas.

Drumming it in.

A WELL-KNOWN provision company is at present exhibiting in shop-windows a toy drum about 10 in. in diameter and 6 in. deep, on the parchment of which are printed words such as the following:

"You can beat a drum,
but
you can't beat
BLANK'S TEA."

Perhaps the idea may be useful to some chemists.

Living Advertisements.

At a ball held at the Pietermaritzburg Town Hall recently, a daughter and a son of Mr. W. J. Walker, chemist, Pietermaritzburg, let all who were there know that they are



children of pharmacy, their fancy-dresses being as depicted in the photographs reproduced here. The costumes were original, and attracted a great deal of attention as living advertisements.

A Pharmaceutical Costume.

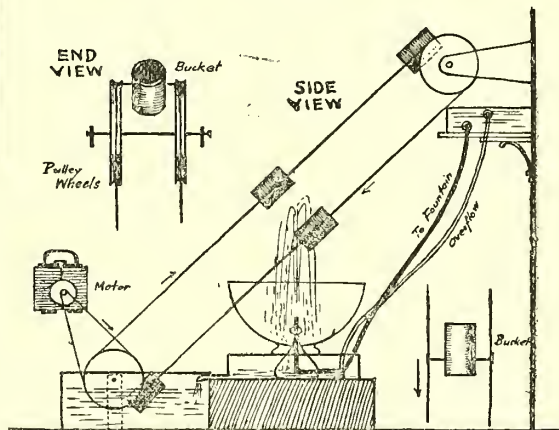
At a Poster Ball at Cootamundra recently the prize for the best lady's costume was given to Mrs. Lester, who represented Mr. C. G. McIntosh's pharmacy. She wore a dress of white satin with a court train lined with golden coloured silk. The front panels of the dress were hand-painted, representing Costa's Cough Cure. A representation of the pharmacy and residence was painted on the train. The trimming was of lint and bandages, and a garland of chamomile flowers and senna leaves threaded alternately. The front of the bodice was cross-tucked chiffon outlined with cough lozenges and throat jujubes. To the sleeves and train were hung sponges, puffs, soap, tooth-brushes, corn cure, tubes and tiny bottles of scent, baby soothers, poppy heads, pill boxes, and other articles from the chemist's stock. The head-dress was a pestle and mortar, carried out in white satin and gold. A long gold wand was carried with streamers of white, gold, and purple bearing the name "C. G. McIntosh" in gold letters. The name was also on the pointed waist belt and in bold handsome lettering on the hem of the skirt in three colours. Labels of Thelma scent kept the long gloves in place, and, says the local paper, "as the tall, graceful lady who wore it paraded the room the costume was admired by everyone."

"VETERINARY COUNTER PRACTICE."—A firm of agricultural chemists (131/38), in ordering the new edition of this book, say: "We made pounds out of the first edition." The latest is a bigger and better book.

"THE CHEMIST-OPTICIAN."—"G. B. W." (16/51) says this is "a marvellous compendium of useful information on visual optics." A Transvaal chemist (131/14) also writes: "As the first among local chemists to add an optical department, I wish to express my appreciation of your efforts."

Chemists' Windows.

Contributed by "C. & D." Subscribers. The Editor will be glad to receive photographs of effective window-displays for inclusion in this section. Notes on the displays should accompany the photographs. We pay for what we use.



A Fountain for the Window.

THE contrivance outlined above is extremely simple. Bands (of string) continually carry up buckets (insect-powder tins) over twin pulley-wheels (tobacco-tin lids), thus feeding an elevated tank which supplies the 12-in. fountain, the same water being used over and over again. It is very simple in principle, but extremely difficult to adjust practically so that the side-by-side bands should run evenly and at the same rate. The basin of the fountain is an inverted opal lamp-shade. Two ordinary male ferns are introduced to give a desirable touch of greenery. The four buckets carry up about 8 oz. of water per minute, permitting a fountain of considerable volume. My working-class public are immensely interested in this window—not so much in the general effect (which is pretty) as in the "way it is done."—E. DANGERFIELD.

A Generalisation.

(By a Fairchild Scholarship Candidate.)

I consider the first essential of a window's success to be its construction. Even a small window, if sufficiently high, may be made profitable. The window should be fitted with plate glass, and inserted about 3 feet from the ground. It should not be adorned with enamelled letters or such advertisements, but should remain plain. Many windows are hopelessly spoilt by their being extended too far back and owing to lack of shelves. Bring the back of the show as near the window-plate as possible, and cover the shelves sufficiently to prevent the window having an empty or bare appearance. The more shelves the better. Do not simply show the window bottom lined with one or two tablets of soap. This gives people the idea that the owner has no stock. Many high-class pharmacies do not show articles for sale in the window, but their reputation is already made. The articles selected for show should be of the best quality; inferior goods may be tempting accompanied by a ridiculously low price, but the fact remains that a new viewer of the window judges the shop as a whole from its outside appearance. Good quality of articles shown will always ensure new customers. Again, articles should never be shown out of their proper season or wrongly blended. What looks more ridiculous than cod-liver oil shown in the middle of July or health salts in the middle of winter? When a real window show is required do not select the articles indiscriminately. If sponges are shown let the window as a whole constitute a toilet-display, accompanied by the necessary tooth-brushes, soap, shampoo-powders, etc. That is for the warmer months of the year. On the other hand, a good winter show should be made of cod-liver oil, extract of malt and oil, cough-tablets, hot-water bottles, and chest protectors, accompanied by some reliable cough-mixture. The customer on such an occasion cannot help realising the uses of such articles, but if the window is filled with a hundred and one different articles, the viewer simply looks, and that is all, for when looking at one article his or her attention is distracted by an adjacent article. Last, but not least, see that the window is well lighted and, if possible, keep absolutely free from dust and dirt.—No. 19.

Optical Observations.

By A Chemist-Optician.

THE RETINOSCOPE.

I MENTIONED recently the use of the retinoscope as a preliminary to the ordinary routine of testing, and probably a few simple explanations of the principal difficulties which seem to present themselves to beginners will be of service to those who are not familiar with the use of this handy little instrument. One of the first trials of the novice always seems to be a difficulty in fixing the patch of reflected light on to the customer's eye, at the same time keeping his own eye in position at the sight-hole of the retinoscope; there is no difficulty in doing so when the mirror is not in position, but as soon as the refractionist attempts to look through the aperture the reflex is lost, and the patch of light is wandering aimlessly about, and vain endeavours are made to bring the light spot back again. The method I generally adopt, and one which saves a good deal of time, is to place the retinoscope before the right eye, and to fix the patch on the customer's waistcoat with the left eye, then gradually tilt the mirror until the spot travels up to the eye. This procedure soon becomes mechanical, and there is none of that hesitation on the part of the refractionist which, when repeated several times in the course of an examination, might give a bad impression.

AN IMPORTANT POINT

frequently overlooked is the fact that the optician's own vision must be emmetropic, as otherwise his own defect will be added on to the observed error of refraction in the subject's vision. Many people have a low degree of defect without ever suffering any inconvenience from it or wearing a correction of any kind; but I have seen students constantly getting over-correction with the retinoscope without being able to trace any fault in their method until ultimately it was discovered that the excess of error was the measure of their own defective vision. This error must be corrected first, or at any rate the exact amount ascertained and allowed for each time, as there is always some slight trouble from reflections when using a retinoscope and wearing glasses at the same time.

A SIGN OF THE TIMES.

A characteristic sign of the way in which chemists are rapidly taking up optical work as a valuable addition to their business may be noticed in the new catalogue of Messrs. Allen & Hanburys, Ltd., in which a complete set of test-types is reproduced, with explanatory text attached. Chemists all over the country are quickly realising that their scientific training and knowledge are peculiarly adapted to their advancement in refractionists' work, and a large percentage of the successful candidates at the examinations of diploma-granting bodies come from the ranks of pharmacy. I should strongly advise all young members of the trade who come up to town to study for the Minor to take the opportunity to acquire some optical training after that dreaded ordeal is over. There are facilities for doing so in London, Manchester and Glasgow, at least, and in these days of keen competition it is just as well to have a thorough knowledge of all subjects likely to be of service in a future business career.

SMOKED GLASSES.

At this season of the year a very good line to show is smoked glasses, especially at seaside or holiday resorts, as the glare of the sun on the sands or white, dusty roads is very trying to the eyes, especially if there is any tendency to asthenopia. I do not advise, however, more than a very slight tint, as photophobia, or intolerance of light, has been known to be induced by the indiscriminate use of tinted glasses. Smoked lenses are preferable to blue glasses, as they lessen the intensity of all the light-rays, whereas blue glass still allows the blue and violet rays to pass through, thus obviating the effect they are desired to produce.

REPAIRS.

The usual practice for opticians in the ordinary way of business is to send all their jobbing to a wholesale house, from which it is received back by return of post. The necessary plant for fitting spherocylinders, etc., is too ex-

pensive for the retailer unless he is doing a considerable trade, and with the amount required to keep a representative stock of unedged lenses makes a total that would surprise anyone who has not figured it out. Another point which a chemist would have to consider would be the time required, so that in the majority of cases it is the rule to send the jobbing out. At the same time, it is very useful to have some skill in the manipulation of tools, as a little fitting or changing of parts that can be effected in a few minutes will frequently be necessary. In such cases it might inconvenience a customer to send the work away. In this connection it is well to have a few pliers, joint-blocks, and a small supply of spare parts, such as sides, springs, and screws. It is always advisable to neutralise the lenses when they come in from the wholesaler, as not only is it a check on one's work, but it is quite possible to have made a slip in writing the order or otherwise, which, if found out before handing over the spectacles to the customer, would prevent a good deal of trouble later on.

New Books.

These notes do not necessarily exclude subsequent reviews of the works. Any of these books printed in Great Britain can be supplied, at the published price, to readers of this journal on application (with remittance) to the Publisher of "The Chemist and Druggist," 42 Cannon Street, London, E.C.

Banks, N. *A Revision of the Ixodoidea or Ticks of the United States*. 9x6. Pp. 61. Swd. 4s. net. Bulletin U.S. Dept. of Agriculture. (Wesley.)

Bromhead, Horatio K. *Health Knowledge for Preventing the Approach of Disease*. 7x4½. Pp. 108. 1s. net. (A. Owen.)

Clarke, J. H. *Whooping-cough cured with Coqueluchin*. 7x4. Pp. 90. 2s. net. (Homœopathic Publishing Co., 12 Warwick Lane, London, E.C.)

Cole, Sydney W. *Exercises in Practical Physiological Chemistry*. 2nd edit. 7x4½. Pp. 172. 5s. net. (Simpkin.)

Cowan, T. W. *Wax Craft: All about Beeswax, its History, Production, Adulteration, and Commercial Value*. Crown 8vo. Pp. 172. 2s. net. (Low.)

Eisner, Dr. Wolff. *Ophthalmic and Cutaneous Diagnosis of Tuberculosis*. Royal 8vo. Pp. 207. 7s. 6d. net. (Bale.)

Farrell, Frank J. *Dyeing and Cleaning: A Practical Handbook*. 78 illus. 7x5½. Pp. 242. 5s. net. (Griffin.)

Froggatt, W. W. *Australian Insects*. Illus. 8vo. Pp. 463. 17s. 6d. net. (Wesley.)

Grimshaw, John. *Your Child's Health: Medical Notes for Mothers and Teachers, School Nurses, and Health Visitors*. 8x5½. Pp. 144. 2s. 6d. net. (Churchill.)

Harrison, Charles, and Douglas, John C. *Photographer's Handbook*. 6x4. Pp. 164. 3s. net. (Lane.)

Herbert, H. *Cataract Extraction*. 8x5½. Pp. 400. 12s. 6d. net. (Baillière.)

Husband's *Practice of Medicine*. 6th edit. By R. F. C. Leith and R. A. Fleming. 7x4½. Pp. 1,164. 12s. net. (Simpkin.)

Learned Societies and Institutions, Handbook of America. 10x7. Pp. 592. Swd. 20s. net. (Wesley.)

Luke, Thomas D. *Guide to Anesthetics for the Student and General Practitioner*. With 43 illustrations. 3rd edit. 9x5½. Pp. 152. 5s. net. (W. Green.)

Marks, G. C. *Maternity Nurses' Charts and Case Book*. Royal 8vo, limp. 1s. net. (Baillière.)

Muller, G., and Glass, A. *Diseases of the Dog*. Illus. Royal 8vo. 21s. net. (Baillière.)

Palmer, Sir F. B. *The Companies Acts, 1907, and Limited Partnerships Act, 1907*. 2nd edit. Royal 8vo. 7s. 6d. (Stevens & Sons.)

Segerblom, Wilhelm. *Laboratory Manual of Qualitative Analysis*. 8vo. 3s. 6d. (Longmans.)

Thomson, John. *Guide to the Clinical Examination and Treatment of Sick Children*. 2nd edit. 9x5½. Pp. 658. 12s. 6d. net. (W. Green.)

Wade, E. J. *Secondary Batteries: Their Theory, Construction, and Use*. 8x5½. Pp. 502. 10s. 6d. net. ("Electrician" Office.)

Wing, H. H. *Milk and its Products*. 8vo. 6s. 6d. net. (Macmillan.)

THE EXPORTS OF MUSK from Hankow during 1907 amounted to 110 lb., valued at 3,486l., compared with 173 lb., valued at 6,271l., in 1906.

Trade Report.

NOTICE TO BUYERS.—The prices given in this section are those obtained by importers or manufacturers for bulk quantities or original packages. To these prices various charges have to be added, whereby values are in many instances greatly augmented before wholesale dealers stock the goods. Qualities of drugs and oils vary greatly, and higher prices are commanded by selected qualities even in bulk quantities. It would be unreasonable for retail buyers to expect to get small quantities at anything like the prices here quoted.

42 Cannon Street, London, E.C., August 20.

THERE have been indications of an improved feeling in the drug and chemical markets this week, a better all-round demand having sprung up, which is somewhat exceptional for August. The alterations in values are fairly numerous, those in the heavy-chemical group including an advance in arsenic, ammonia sulphate, and acetate of lime; copper sulphate is also firmer. On the other hand benzols and crude carbolic acid are fractionally easier. Among the fine chemicals, chrysophanic acid and hydrastine are dearer; acetyl-salicylic acid is lower, and cocaine has an easier tendency. Citric and tartaric acids and cream of tartar are extremely slow for the time of year. Quinine is dull, and a rise in refined glycerin seems imminent. The stand-out feature in crude drugs is the advancing and active market for cascara sagrada in sympathy with the United States. Ergot, Russian cantharides, quillaia, serpentine and peppermint oil are all firmer, and on the easier side we have senega and damiana for shipment. The failure of an important New York shellac house has somewhat disorganised this article, and prices are lower. The fluctuations of the week are summarised as follows:

Higher	Firmer	Easier	Lower
Acetate of lime	Cantharides	Benzols	Acid acetyl-
Ammonia	(Russ.)	Damiana	salicylic
sulphate	Copper	Potashes	Shellac
Arsenic	sulphate	Resin	Terpin
Cascara	(forward)	Senega	hydrate
sagrada	Ergot	Tartaric acid	
Chrysophanic	Peppermint		
acid	oil		
Hydrastine	Quillaia		
Serpentine			

Cablegrams.

SMYRNA, August 19:—The principal sellers of opium have formed a syndicate and have decided to maintain the prices of new at from 13s. 3d. to 14s., and of old opium at from 14s. 3d. to 15s. 6d. per lb.

NEW YORK, August 20:—Business in drugs is fair. Opium is 10c. per lb. easier at \$5.40 per lb. for druggists'. Cascara sagrada is nominal at 8c. per lb. Hydrastis (golden seal) is firm at \$2. Tonka beans are higher at \$1.50 for Angostura. Peppermint oil is 10c. firmer at \$1.50, and Central and South American copaiba is easy at 45c. per lb.

Heavy Chemicals.

Although the volume of actually completed new business continues on the low side in the heavy-chemical market, there is undoubtedly a heavier inquiry, especially for main products, so that present indications point towards some improvement in the market. Generally speaking, the all-round tone is quiet but firm. Values keep very steady, and for the most part are well maintained.

SULPHATE OF AMMONIA continues very firm, and although matters are somewhat quieter than they were, there seems to be a likelihood of further advanced prices ruling. A fair business has been concluded for deferred delivery. Present nominal figures are: Beckton, September-December, 11l. 15s. to 11l. 17s. 6d., Beckton terms 11l. 7s. 6d., London 11l. 7s. 6d., Leith 11l. 12s. 6d., and January-June delivery 12l. to 12l. 5s. Hull 11l. 5s. to 11l. 7s. 6d.

ALUMINA PRODUCTS continue in good average consumptive request, both on miscellaneous and contract account. Attention

is now being given towards next year's requirements, for which makers want full figures, and where late contracts have been abnormally low, even advances. Crystal alum lump 5l. 2s. 6d. to 5l. 10s., lump in ticses 5l. 7s. 6d. to 5l. 15s., and ground in bags 5l. 12s. 6d. to 6l. per ton on rails, Lancashire and Yorkshire. Sulphate of alumina, purest qualities and practically free of iron, ordinary strength 4l. 12s. 6d. to 5l. 2s. 6d. per ton delivered in usual casks, with customary extras for similar pure quality in higher concentrations, and usual allowances for bags and loose slabs. Aluminous cake 50s. to 55s. per ton, and aluminoferric 50s. to 60s. per ton, according to quality, quantity, and condition. Hydrate of alumina, purest quality and high strength Al₂O₃, 12l. 10s. to 13l. 10s. per ton in large cask, free on rails. Special pulp hydrate of alumina 15s. to 17s. 6d. per cwt. c.i.f. Special pulp quality, dried and in lumps, 37s. 6d. to 40s. per cwt. c.i.f., and ground 38s. to 40s. 6d. per cwt. c.i.f. Aluminate of soda, purest quality and high strength Al₂O₃, 32s. 6d. to 35s. per cwt. Carbonate of alumina 35s. to 37s. 6d. per cwt.

Manchester Chemical-market.

(From our own Correspondent.)

Manchester, August 19.

We are apparently in for a quiet time for the next month or two, as the "Wakes" holidays are being held in important Lancashire centres. Notwithstanding this, there is a fairly steady tone in heavy chemicals, but in drugs and drysalteries there is not much movement. Arsenic is in better inquiry, and much higher. Sulphate of ammonia steady, but benzols and crude carbolic are fractionally lower. Farinas and sizing flour in buyers' favour. There is little doing in oils. Ammonia muriate, 24l. per ton; sulphate of ammonia, 11l. 1s. 3d. to 11l. 2s. 6d., on rails Manchester. Acids: Arsenic, S.G., 2,000°, 26s. 6d.; glacial acetic, 35s. per cwt.; sulphuric (free from arsenic), 145°, 36s. per ton. Aniline oil, 5½d.; salts, 5d. per lb. Chloride of barium, refined crystals, 7l. 10s. per ton. Barytes, refined white, 32s. 6d. to 35s.; grey, 35s. to 37s. 6d. per ton. Benzols, 50's, 7d. to 7½d.; 90's, 7d. per gal. Carbolic acid, 39° to 40° C., crystals, 4½d.; 34° to 35° C., 4½d.; crude 60's, 1s. 4d. to 1s. 4½d., East Coast; 1s. 3½d. to 1s. 3¾d., West Coast. Carbide of calcium (for acetylene-gas manufacture), 12l. to 14l. 10s. per ton. Copperas (green), 42s. 6d. to 45s. per ton, f.a.s. Manchester Ship Canal. Bleaching-powder, 4l. 5s. to 4l. 10s. per ton, softwood casks, on rails at works. Glycerin (chemically pure, in tins and cases), 65l. to 66l.; 5-cwt. drums, 61l. per ton. Foreign white sugar of lead, 23l. to 23l. 10s.; grey, 20l. 10s. to 21l.; nitrate, 24l.; acetate, 23l. per ton. Methylated spirit (61 o.p.), 1s. 8d. per gal. Naphthalene, 4l. 10s. to 8l. 10s.; salts, 30s. to 35s. per ton; manganese, 94-per-cent., 30l. to 32l.; 80 to 85 per cent., 7l.; 70-per-cent., 6l. 15s.; 60-per-cent., 5l. 15s. per ton. Potash: Carbonate, 90-per-cent., 17l. 10s.; caustic, 87 to 90 per cent., 23l. 5s. per ton; chlorate, 3½d. per lb. Glauber salts, 42s. 6d., f.o.r. Sulphate of magnesia (Epsom salts), 60s. per ton, bags, and 70s. to 85s. per ton, casks and barrels (export), according to quality. Verdigris (English), 9d. per lb. White powdered arsenic, 16l. 10s. to 17l. per ton. Sulphate of copper, 22l. 10s. per ton, best brands, delivered Manchester. Suboxide of copper (commercial powder), black, 10½d.; red, 11d. per lb.

Continental Drug and Chemical Markets.

ACETIC ETHER.—The more uniform prices now quoted point towards an agreement among the makers, but the possibility of higher values is remote.

AMMON. CARB.—English makers have decided to make contracts until the end of 1909, and quotations for the ordinary trade requirements are now at 58m. per 100 kilos. c.i.f. Hamburg, duty not paid. It is not anticipated that contracts will be made for so far forward, as the market, on the whole, is uncertain.

BALSAM, PERU.—In consequence of the continued reserve of buyers, prices have fallen still further. It is also stated that Peruvian shippers would be glad to dispose of several lots lying at German ports. In these circumstances further reserve is advisable.

CARNAUBA WAX.—Further supplies have been received in Hamburg, and these tend to weaken the market, although there is no intimation of a declining tendency in Brazil. Fatty grey is 195m., sandy grey 185m. in quantity ex warehouse.

COCA-LEAVES.—For some time the supply of leaves of good quality has been limited, though there are large quantities of inferior on the Hamburg market, in which no interest is shown. If there were a slight improvement in the demand it is possible that further supplies would be sent from producing centres.

ERGOT.—Offers to Russia and Spain of 2m. per kilo. were not closed with, as the crop in both countries is said to be small; for shipment from Russia 2.30m. is quoted, while Spanish realises 2.40m. per kilo. first cost. Any cheap spot (Hamburg) supplies which were still on hand were quickly absorbed, and the quotation for Russian is now 2.10m. and Spanish 2.15m. There are still some offers of wormy obtainable below these quotations.

LYCOPODIUM is steady, with a good demand. Prices have hardened still further, and cases are not obtainable below 4.45m., bags being offered at 4.35m. per kilo.

TERPIN HYDRATE.—In consequence of the low quotations for oil of turpentine, prices for terpin hydrate are also somewhat lower. At present quotations for chemically pure range from 180m. to 200m. per 100 kilos.

THYMOL.—There has been a good steady demand, though values are still affected by keen competition. At present quotations range from 15.50m. to 16m. per kilo.

ZINC OXIDE.—For some time negotiations have been in progress with regard to the formation of a convention of all the raw zinc producers, and it is hoped that some favourable result may be arrived at. There is consequently a better demand, while producers maintain a more reserved attitude.

American Drug-market.

New York, August 11.

Business in drugs has mildly improved, and with the holiday season in full swing market conditions have assumed a more normal appearance. Prices generally have been well maintained, and in several instances advances have been scored. **Cascara sagrada** and **hydrastis** are higher, **peppermint** is firmer, and **opium** is easy.

ALOES.—Curaçao in boxes is finding a steady outlet at 6½c. to 7c. for the usual jobbing supplies, with a shade less available for large lots. Gourds are rather scarce, and the limited demand is supplied at 10c.

CANADA BALSAM.—The small stock in this market is firmly held at the recent advance to \$6, in sympathy with the strengthening tendencies at primary sources, where little is obtainable. The extravagant prices lately prevailing for this article have induced considerable restriction of its use in favour of cheaper products. Oregon is plentiful and steady at \$1.10 per lb.

CASCARA SAGRADA rather unexpectedly advanced 1c. during the week, the spot market closing firm at 7c. as an inside price for manufacturing supplies. Reports of a poor yield have arrived on time this year, and are supported by firmer quotations from the coast. It has been suggested, however, that a closer control of the primary holdings accounted for the upward turn.

COPAIBA.—C. & S. American is in good supply, and a fair business has been done in the better grades for foreign account. U.S.P. varieties are quoted within the range of 45c. to 50c., and the tone of the market is steady. From 70c. to 80c. is asked for Para, according to quantity and seller.

HYDRASTIS has been in active demand during the interval, and the price of fall-dug has again advanced, \$2 to \$2.05 now ruling. The position of spring root is correspondingly strong, and nothing is available on spot below \$1.80, while \$1.70 is the best that can be done in the primary markets.

OPIUM continues in easy tendency, uninfluenced by the reports of a firmer primary market. Demand is miserably slow, and there is keen competition for the business. The spot quotation of \$5.50 for cases can be shaded in some quarters, even for broken lots.

PEPPERMINT OIL (AMERICAN) is in unchanged position, with prices at \$1.40 to \$1.55 for "tin" oil on spot. Distillation of oil is now in progress over all the producing areas. As previously reported, almost ideal conditions have been experienced during the growing season and a heavy crop was expected. Recently the weather has been dry, which condition is said to favour production of a finer oil, although in lesser quantities.

SARSAPARILLA (MEXICAN).—Spot supplies are under close control, and 8½c. is an inside price.

SERPENTARY is scarce and firm at 47c.

TONKA-BEANS.—Angostura is in active seasonable demand, and owing to the reported shortage in the new crop most dealers have advanced prices to \$1.25 per lb.

Alpes-Maritimes Crops.

JASMIN.—The **jasmin** flowers have arrived at the factories, the crop being slightly later than in former years. The recent rains and the lateness of the summer caused delay in the blossoming of the flowers, and, according to the cultivators, the buds have sustained some damage. The crop is a medium one, but sufficient to afford the necessary quantity of essence for normal consumption. The Grasse cultivators have extended their plantations within the last three years, as the demand for **jasmin** pomade has increased. **Jasmin** pomades "par enfleurage" have absorbed very large quantities of flowers, and it may be noted that the popularity of these pomades has been little affected by the process of extraction by petroleum solvents. As a fact the tendency to substitute **jasmin** pomade for the concrete essence of **jasmin** is becoming more evident; nevertheless the concrete product continues to be manufactured on a large scale in the Grasse factories. Quotations for **jasmin** will not be advanced.

TUBEROSE.—As has been intimated, a good deal of damage has been done to the tuberoses, and some of the holders have

already decided not to sell at the usual prices. A considerable advance in price may be expected as compared with last year's quotations, and the supplies will probably be inadequate. It would be advisable, therefore, to cover as soon as possible.

PEPPERMINT.—As a result of the various syndicates which have been formed, **peppermint** is affected by the demands of holders, who have succeeded in raising prices by at least 25 per cent. to 30 per cent., as compared with those of former years. The plants are in fine condition, and the crop is promising.

GERANIUM.—The species known as "Geranium de Grasse" promises fairly well. This plant requires a lot of water, and plantations are generally situated in damp areas watered by rivers. The geraniums benefited by the recent rains.

LAVENDER.—The distillation of lavender has commenced, but nothing definite can be stated as yet. On reviewing the situation and on considering the general conditions, it is probable that prices will be lower than in previous years, without, however, reaching the low level which obtained some five or six years ago.

SPIKE.—Stocks are practically exhausted everywhere, and the new crop is not very promising.

TARRAGON.—Fairly large quantities have been distilled, and quotations remain unchanged.

Japanese Drug and Chemical Markets.

Yokohama, July 4.

The drug market continues slow, and there is little prospect of recovery in business until the Bank rate is reduced. Among export articles crude iodine is practically unobtainable on the spot; the present nominal quotation is yen 3.70 per lb. Potassium iodide is also difficult to obtain for prompt delivery, and for forward yen 3.20 per lb. is quoted. **Meathol** meets with a small trade demand, but speculation is at a standstill, yen 4.20 per catty being the nearest value. Dried ginger is firmly held at yen 11.50 per picul, with rather a large business on Indian account. Aniseed is quiet at yen 7.00 per picul. Among imports, carbolic-acid crystals remain low at 27 sen per lb., with a fairly heavy supply. Citric acid is firmer at 85 sen per lb., and c.p. tartaric acid is firm at 60 sen per lb. Cocaine hyd. sells well at the recent reduction to yen 4.85 per oz. Codeine phosphate is higher at yen 6.00 per oz., and morphine has advanced considerably, yen 67 per lb. being quoted. Bismuth subnit. is firm at yen 3.30 per lb., which is about 10 per cent. lower than the cost to import. Potassium bromide is lower at 27 sen per lb., owing to speculators selling at a sacrifice.

ACETATE OF LIME has advanced to 16l. 10s. per ton.

ACID, ACETYL-SALICYLIC, was reduced a further 1d. per lb. last week, makers quoting from 1s. 10½d. to 2s. 2½d. per lb. according to quantity.

ACID, CHRYSOPHANIC.—Owing to the fact that araroba is again extremely scarce there has been a considerable advance, the lowest price being now from 12s. to 12s. 6d. from second hand, but only limited quantities are offered. Makers, who quote 13s. per lb., are unable to deliver for a few weeks.

ACID, TARTARIC, is extremely slow, but quotations are nominally unaltered at 10½d. per lb. for foreign and at from 10½d. to 11d. for English.

ALOES.—Practically the whole of the first-hand stock of Socotrine in kegs (about 70) has changed hands at full prices. Of Curaçao 25 boxes have arrived, and another parcel is on the way. Fifty-four cases Cape have also arrived from Mossel Bay.

ARSENIC.—It is reported that values, which are extremely low, show a tendency to improve; English powder is quoted 16l. per ton.

BALSAM TOLU.—Under the influence of increased supplies in New York, prices there have been reduced to 20c. to 21c. per lb.

BENZOIN.—No arrivals have taken place this week, and the stock of all descriptions is now lower than it has been for a number of years. Palembang is scarce and wanted, the first-hand stock having now been cleared.

BISMUTH.—Rather a brisk business has been done in the leading salts. Makers quote carbonate at 7s. 3d. and subnitrate at 6s. 3d. per lb. in at least 2-cwt. lots.

BUCHU is scarce, with good green round leaf unobtainable; yellowish can be had at 8½d. There is a fair inquiry, but orders are difficult to fill.

CAMPHOR (CRUDE).—The spot price of China crude is maintained at 165s. per cwt., and for August-September shipment 157s. 6d. c.i.f. is quoted, the latter price being

easier; a fair amount of business has been done at these prices.

CAMPOR (REFINED).—There are still sellers of 1-oz. Japanese tablets at 1s. 9d. on the spot, and 2½-lb. slabs offer from second-hands at 1s. 8½d. c.i.f.

CANTHARIDES.—Quotations for new Russian are distinctly firmer at from 2s. 7d. to 2s. 8d. per lb. c.i.f.

CASCARA SAGRADA.—The position has undergone a considerable improvement since our last. In sympathy with the higher prices cabled from New York and the Pacific Coast, where business in quantity has been done at substantially higher rates—*e.g.*, the sales are reported to aggregate 15 tons in New York at prices equal to from 37s. 6d. to 39s., and from the Pacific Coast 42s. 6d. c.i.f. was cabled on Wednesday. On the spot endeavours have been made to depress prices, a "bear" seller offering several parcels at the low price of 32s. 6d., which lots were promptly secured. Subsequently 35s. was paid, at which there are still buyers, but to-day there are no sellers under 40s. to 42s. 6d. in quantity; small lots are reported to have changed hands at up to 42s.

CASSIA LIGNEA.—At auction thirty-four packages sold without reserve at from 43s. to 46s. for dullish to fair quill, and at from 37s. to 38s. for fair broken.

CHILLIES.—At auction thirty-two bags good red Nyasaland sold at from 44s. to 46s. per cwt.

CINCHONA.—At the London auction on Tuesday 164 packages East Indian were offered, of which 111 packages sold at the average unchanged unit of 5½d. per lb. The total weight of the offerings was 32,988 lb., of which 13,226 lb. was bought in, druggists' purchases amounting to 9,515 lb.; the Brunswick factory bought 5,050 lb., the Mannheim factory 3,900 lb., and Messrs. Howards & Sons, Ltd., 1,197 lb. The prices paid included Ledgeriana, good stem chips 3½d., officialis stem chips 2d. to 2½d., and root 2¾d. Succirubra, original stem chips and shavings 1½d. to 3¼d., false-packed branch 1d., and root 1¾d. to 3½d.; 6 cases bold silvery druggists' quill sold at 4½d. per lb. The 9,367 packages of Java bark to be offered at auction at Amsterdam on August 27 weigh 843,922 kilos., and contain the equivalent of 49,871 kilos. of quinine sulphate, as contrasted with 9,090 packages, or 44,754 kilos. of quinine at the auction in July. The average percentage of quinine in the manufacturing bark is 6.4 per cent., as compared with 6.14 per cent. in July. The above 9,367 packages comprise 716,877 kilos. of manufacturing and 127,045 kilos. pharmaceutical bark, the quinine contents of which is 45,852 kilos. and 4,019 kilos. respectively. The shipments of bark from Java during the first half of August amounted to 726,000 Amst. lb., against 616,000 Amst. lb. during the same period of 1907, and 705,000 Amst. lb. in 1906.

CLOVES.—There were no offerings at auction; privately sales of fair Zanzibar have been made at from 4½d. to 4¾d. per lb. on the spot, and for delivery prices are dearer, with few sellers. The business includes August-October at 4½d., October-December at 4¾d. to 4¾d., and to arrive January-March shipment at 4½d. to 4¾d. c.i.f. delivered weight.

COCA LEAVES.—At auction at Amsterdam on August 27, 108 packages Java leaves will be offered, weighing 5,472 kilos.

COCAINE is quiet, and in second hands prices are easier, with sellers of hydrochloride at from 7s. 4d. to 7s. 9d. per oz., while makers' price is 8s. 3d. upwards. The market for crude remains firm, but with a slow demand a cheap seller of hydrochloride here and there is anxious to make progress.

COPPER SULPHATE for prompt delivery is unaltered; Liverpool brands offering at 20l. 5s. per ton, but for January-April, prices have appreciated 5s. to 10s. at 21l. 5s. to 21l. 10s. per ton.

DAMIANA LEAVES are easier in New York owing to the receipt of abundant supplies; there are sellers at from 8½c. to 9½c. per lb.

DRAGON'S-BLOOD.—Thirteen cases of seedy lump have arrived this week. A few sales of *Reed* ex the parcel offered at auction have been made at 8l. 15s. per cwt., and several cases of good reboiled Singapore lump, also ex auction, have changed hands at 11l. 10s. per cwt.

ELEMI.—The *Teucer*, from Manila, has brought twenty cases to Liverpool.

ERGOT is firm, business having been done on the spot at 1s. per lb. for Russian, and for Spanish 1s. 3d. is quoted. All the cheaper parcels appear to have been absorbed, and as yet offers of new crops are scarce. Hamburg has sold a fair quantity of late, and stocks are low.

GAMBIER is firm at from 32s. 6d. to 33s. per cwt. on the spot for cubes.

GAMBOGE.—Further sales at auction have been made at 15l. 15s. per cwt. for genuine Siam pipe of good orange fracture.

GLYCERIN is very firm, the substantial advance in crude having had the effect of stimulating the demand for the double distilled, and in several quarters a rise is regarded as imminent. The German refiners this week advanced their price by 5l. per ton, which is an additional reason for an advance on the part of the English refiners. It was anticipated that an advance would have been announced this week, but the fact that several people chiefly concerned in the arrangement of prices are on holiday, is said to account for the delay. The makers' price for double-distilled *s.g.* 1.260 is 63l. 10s. per ton for 5-ton lots in tins and cases, but this price is subject to confirmation by refiners, who are more anxious to sell crude than refined.

GUAIACUM.—Ten casks of good glassy lump have arrived.

GUM ARABIC.—Soudan gums continue steady with spot sales of fair sorts at from 35s. to 36s. per cwt.; to arrive 30s. c.i.f. is quoted.

HYDRASTINE.—Owing to the recent advance in hydrastis, makers have raised the alkaloid by 10s. to 60s. per oz.

IPECACUANHA.—No arrivals have taken place. Small sales of the new consignment of East Indian ex auction have been made at 5s. 6d. per lb.

MACE quiet but firm. Thirteen barrels West Indian sold at 1s. 4d. for fair palish, and at 11½d. for broken. Fourteen cases Penang were bought in at 1s. 10d.

MANNA.—The new crop of manna is already being offered from Palermo. It is reported to be small but of good quality, and values open fairly high.

MENTHOL is firm with small sales of Kobayashi at 7s. per lb., and of Suzuki at 6s. 10d., but for shipment no interest is shown, prices continuing much above London parity.

MUSK.—Quiet. The value of fine blue skin Tonquin pod Pile I. is still 70s. per oz., and Pile III. 50s. to 55s.; old-fashioned Pile I. is quoted 50s. to 55s., and Pile III. 35s. per oz.

MYRRH.—An arrival of 25 cases good native-picked Aden sorts has taken place.

OIL, CASSIA.—Sales of 70 to 75 per cent. *c.a.* have been on the spot at 4s. 7d. per lb., and to arrive higher prices are asked; the sales include 70 to 75 per cent. at 3s. 9½d., 75 to 80 per cent. 3s. 10½d. per lb. c.i.f., and for 80 to 85 per cent. 4s. 3d. c.i.f. is quoted.

OIL, COD-LIVER.—Our previous quotation of 52s. per barrel *f.o.b.* Bergen for finest non-congealing Lofoten oil still holds good, but the demand is quite retail. The exports from Bergen amount to 11,426 barrels, against 7,926 barrels at the corresponding period of last year.

OIL, LEMONGRASS.—Small spot sales have been made at 2¼d. per oz. spot for 75 per cent. citral.

OIL, PEPPERMINT, is firmer for Wayne County oil in tins, several thousand pounds having been sold at 6s. 3d. per lb., c.i.f. terms, but 6s. 4½d. to 6s. 6d. is now the lowest, and even 6s. 9d. c.i.f. is quoted in one direction. H.G.H. is quoted at from 10s. 9d. to 11s. per lb. spot as to quantity and at 9s. 10d. c.i.f. Sales of Japanese dementholised oil to arrive have been made at 4s. 3d. c.i.f. for Suzuki, and on the spot Kobayashi is quoted 4s. 6d.

OIL, SPEARMINT.—The new crop is coming on to the New York market and prices show a steady decline under pressure to sell, there being offers at \$4.00 to \$4.25 per lb.

OIL, TURPENTINE, has fluctuated between 27s. 6d. and 27s. 9d. per cwt., closing at these prices.

OPIUM.—The fact that a syndicate has been formed among the chief opium-sellers has had no effect on this market, buyers and sellers alike remaining indifferent. Under present market conditions it is difficult to do business, and prices are nominal, the few cases of good Turkey druggists'

being held for prices above buyers' ideas. Persian is very quiet also at from 13s. to 13s. 6d. per lb. nominally. A Smyrna correspondent writes on August 14 that the market was quiet this week until yesterday morning, when an American buyer purchased 45 cases old Karahissar at 14s., and a buyer for the Continent secured 8 cases new at 13s. 6d. The position is firm and steady, but we expect bankers will force needy holders again to make further concessions for low-grade new crop. Rich new qualities and the small remaining stock of old Karahissar will be firmly maintained, as all buyers turn their attention to these. The arrivals to date amount to 1,151 cases, against 995 cases.

OTTO OF ROSE.—The demand has improved lately, and prices show a firmer tendency; well-known brands offer at from 24s. to 25s. per English oz.

PEPPER.—At auction nothing was offered. Privately fair Singapore sells slowly on a basis of 3½d. spot, and for September-November shipment 2½d. c.i.f. has been paid for 25 tons. At auction 48 bags decorticated Lampong were bought in at 10d. Privately fair Singapore is offered at 5d. and Penang at 4½d., and for arrival the market is lower, sales including 50 tons at from 4½d. to 4¼d. c.i.f. for August-September and September-October shipment.

PETROLEUM.—Quiet at from 6½d. to 6¼d. for ordinary refined American, 7½d. to 7¼d. for water-white, and 5½d. to 6d. for Russian.

PODOPHYLLUM.—New is quoted 31s. 3d., and old 33s. 9d. per cwt. c.i.f. terms.

POTASHES meet with a slow sale at 35s. per cwt. for first American, 36s. for first Montreal, and 37s. 6d. for first American *pearl* on the spot. In Liverpool Montreal are easier at from 35s. 9d. to 36s. per cwt.

QUILLAIA.—Firm. Sales have been made in Liverpool at 29l. per ton in store, but 30l. is now asked; in London holders quote 31s., and crushed at 37s. 6d.

QUININE dull. Sellers of B. & S. and H.B. quote 7½d. to 7¾d. per oz. from second hands. Amsterdam is offered at 7¼d., and a few sales of Java sulphate for August and September shipment have recently been made at 6½d. per oz. An auction of 50,000 oz. Amsterdam brand quinine sulphate will be held on Friday, September 4, at Amsterdam.

RHUBARB.—A parcel of 42 cases part rough round horny High-dried has arrived.

SARSAPARILLA.—Arrivals are unimportant, including eight bales of red native.

SENEGA.—The new crop of Western is offered at the easier rate of 1s. 7½d. per lb. c.i.f. in quantity.

SERPENTARY is extremely scarce on the spot, and for shipment the high price of 2s. 6d. per lb. c.i.f. is quoted.

SHELLAC.—It is stated that a well-known New York house having extensive dealings in shellac has suspended payment. The firm in question is understood to be one of the largest importers, but there are few creditors on this side. The announcement has temporarily disorganised the market here, and in consequence little speculative business has been done. On the spot retail sales of fair T.N. have been made on the basis of 115s., but this price is now nominal. Good and fine orange marks are neglected, values being from 135s. to 150s. per cwt. Future are lower, December delivery having been sold at 114s. to 110s.

TONKA BEANS.—Angostura continue extremely scarce on the spot; a small business has been done at 5s. per lb., but 5s. 6d. is now asked, and from Hamburg 6s. 6d. is quoted.

VANILLA.—At auction 488 tins (mostly Seychelles) were offered, of which about 180 tins sold at about steady prices. No fine quality was offered. Foxy and split sold at previous prices, fair being quiet. Seychelles, firsts, 6 to 7 in., 6s. 6d.; 4 to 6 in., 5s. 6d. to 6s. 6d.; 2½ to 4 in., 5s.; seconds, 3 to 7½ in., 4s. 3d. to 5s. 9d.; fair split, 5s.; brown and split, 3s. 3d. to 4s. 6d.; and various, 4s. to 5s. per lb. Ceylon (82 tins offered, 41 tins sold), plump firsts, 7 to 8 in., 8s. 3d. to 9s. 6d.; 6 to 6½ in., 7s. 6d. to 8s.; fair, 3½ to 5 in., 5s. to 5s. 6d.; split, fair to good, 4s. 6d. to 6s. 6d.; and

various 3s. to 4s. 6d. per lb. Mauritius (25 tins offered and sold), fair to good, 4 to 7½ in., 4s. 6d. to 5s. 6d.

WAX, CARNAUBA.—Both yellow and wax grey are steady at 105s. and 92s. 6d. per cwt. respectively, but chalky grey is easier at 86s. to 87s. spot.

WOOD OIL.—Hankow is extremely quiet, with sellers of September-October steamer shipment at 26s. 6d. per cwt. c.i.f. terms.

Camphor.

In Tokyo the dulness of the camphor market is believed to be due to the fact that large contracts were concluded in advance by the former agents of the Formosan monopoly prior to the expiry of their term, and to the competition in synthetic camphor. The Japanese Monopoly Bureau, however, holds that it is inadvisable to lower the price of camphor, and is still (July) selling it at 113 yen. The existing congestion of camphor abroad, it is anticipated, will diminish as time passes; while it is hoped in Japan that the downward tendency of the market will materially affect South China and synthetic camphor. The prospect for higher prices in Japan is regarded as no means bright, but, on the other hand, pessimism is unwarranted.

Moxa.

H.M. Consul King, in his report on the trade of Wuchow for 1907, states that the exports of moxa amounted to 417 cwt., valued at 10,191l., as compared with 138 cwt., valued at 3,703l., in 1906, but in the latter year no return of the amount exported through the native Customs was furnished. Of the 417 cwt. shipped in 1907, 343 cwt. is reported as having been exported through the native Customs. Moxa, which is prepared from the young leaves of the *Artemisia chinensis*, is exported principally to Japan, where it is enclosed in small wooden egg-shaped holders with screw corks. It is then largely re-exported to China, its medicinal qualities being held in high repute by the Chinese, who apply it externally in cases of cold and fever. Its cultivation in T'enghsien and Hsünchou districts, where it has been recently introduced, seems to have been successful. Further particulars about "moxa" were given in our issue of December 7, 1907 (p. 855).

Tahiti Vanilla.

The slight increase in the quantity of vanilla exported from Tahiti and in the prices realised in 1906 showed further improvement in 1907 in consequence, it is said, of the recent United States Pure Food Act. Owners of plantations were encouraged to put their old vines in order and even to start fresh ones, but there can be no doubt (says the British Consul) that the bean produced by the vine that yields 90 per cent. of the prepared article exported under the name of Tahiti vanilla belongs to an inferior or degenerated variety. Its cultivation, however, appeals to the happy-go-lucky disposition of the inhabitants in that it grows almost anywhere and anyhow, requires next to no care, and produces abundantly. There is not throughout the whole length and breadth of Tahiti a single plantation such as may be seen in other countries, where they are subjected to well known and observed rules as to selection, preparation, and care of the soil and vines, to say nothing of the special attention given to the fruit when it reaches maturity and to its subsequent preparation. Very few natives take the trouble to prepare their own vanilla nowadays, the speciality being almost entirely in the hands of Chinese shopkeepers, who are now in great numbers in every district of the island. The Chinese buy the stuff green, regardless of its stage of ripeness or maturity, and after two months' subjection to the direct rays of the sun produce a finished article, which is shipped to San Francisco and Auckland, where it is disposed of and utilised for the cheaper uses that vanilla is put to. The soil and climate of Tahiti are eminently suitable to the cultivation of vanilla of the highest grade, but to achieve successful results the desirable vines must be imported and proper attention paid to selection of plantations, cultivation, and preparation. The exports in 1907 were valued at 28,257l., against 21,659l. in 1906, 12,087l. in 1905, and 15,969l. in 1904.

EAU DE COLOGNE IMPORTS.—A copy of an Order, dated July 2, has been received by the Board of Trade, stating that it has been brought to the notice of the Australian Commonwealth Department of Trade and Customs that eau de Cologne and other perfumed spirits are being imported in bottles bearing a small separate label showing the actual contents, such spirits being catalogued at reputed quantities in excess of the actual. It has been decided that up to November 1 next duty will be accepted on the quantities stated on the small labels, but, on and after that date, quantities must be shown on the principal label, otherwise duty will be charged on the reputed quantities shown in the catalogues.

Correspondence

TO CORRESPONDENTS.—Please write clearly and concisely on one side of the paper only. All communications should be accompanied by the names and addresses of the writers. Publication of letters does not imply our agreement with the arguments or approval of the statements therein. If queries are submitted, each should be written on a separate piece of paper. We do not reply to queries by post, and can only answer on subjects presumably of interest to our readers generally. Letters received after the early posts on Wednesday cannot as a rule be dealt with in the current week's issue.

BUSINESS INFORMATION.—We have very full records of the makers or agents for articles and products connected with the chemical and drug trades, and supply information respecting them, by post to inquirers. Inquiries regarding any articles which cannot be traced in this manner are inserted under "Information Wanted."

Lawful Personal Rights.

SIR,—Neither the lapse of forty years nor consequent alteration of circumstances appear to be, in themselves, capable of furnishing adequate explanation of the remarkable fact that the Poisons and Pharmacy Bill, which has just passed through the House of Lords, is in one very important respect at variance with the co-related enactment of 1868, by which provision was made against the danger to be apprehended from poisons. That such a discrepancy exists, and that it may, nevertheless, have escaped due notice, seem, however, to be equally evident on comparison of the following extracts from

The Pharmacy Act, 1868, and *The Poisons and Pharmacy Bill, 1908.*

"it shall be unlawful for any person to sell or keep open shop for retailing, dispensing, or compounding poisons,
or

to assume or use the title 'chemist and druggist' or chemist or druggist, or pharmacist, or dispensing chemist or druggist."

A body corporate, and, in Scotland, a firm or partnership,

may carry on the business of a pharmaceutical chemist, or a chemist and druggist, and may use the description of chemist and druggist, or of chemist, or of druggist, or of dispensing chemist or druggist.

The provisions above quoted are, in both cases, conditional, and in order to perceive the relation between the Bill of 1908 and the Act of 1868, the nature of the conditions requires to be considered.

Prior to 1868 the business of retailing, dispensing, and compounding poisons carried on under the trade description of "chemist and druggist" had not been subject to legislative regulation. That business was considered to be the main source of danger to be apprehended from poison, and, the object of legislation on the subject being to obviate that danger, Parliament therefore endorsed the expediency of subjecting the business to regulation by the Act limiting its future exercise to persons having proved experience and acquaintance with poisons, or, in other words, being qualified as provided by that Act. Hence the condition attaching to the above-quoted provisions of the 1868 Act was expressed in the words "unless such person shall be a pharmaceutical chemist or a chemist and druggist within the meaning of this Act."

Obviously the effect of the enactment, in regard to the exercise of the business to which it applies, was to abridge the liberty of the subject; so that since 1868 persons who would otherwise have been free to carry on the business have been under legislative compulsion to qualify as the

Act requires. That the Legislature contemplated only such a person as might comply with the condition it imposed upon lawful exercise of the business of chemist and druggist seems equally self-evident and consistent with common-sense, as well as with the object and policy of the enactment.

If that conclusion has rational foundation, the Act of 1868 is, consequently, to be understood as meaning that the business of chemist and druggist should thenceforth be carried on only by persons complying with the statutory condition of legality; that its lawful exercise is a personal right—a necessary corollary of the restriction imposed by the Act—and a right obtainable only by personal compliance with its provisions. Naturally, therefore, the statute should be understood as prohibiting exercise of the chemist's business, with use of its trade description, by a combination of unqualified persons, or by a personality that could not comply with the condition the Act imposed. Whether such a personality or combination existed or not, in or before 1868, would not alter or affect the meaning of the Act or its applicability to such a case and, accordingly, the conclusion is rational that companies, being both unqualified and unqualifiable, have broken the law by acting as chemists and druggists.

Certainly such a meaning of the 1868 Act and such an application of it have not hitherto met with entire acceptance in the Law Courts; neither has the lawful possession of personal rights under the Act been yet decided or even adequately considered. That result may be attributed to the circumstance of the matter being generally considered as one concerning merely trade interests: the Act and its imposition of restrictive conditions upon exercise of a trade, instead of being regarded as measures of reasonable public policy because of their fitness to effect a good purpose, have been, on the contrary, viewed mainly and erroneously as creating a trade monopoly—directly or indirectly—and as tending to influence unduly the sharing of trade profits.

The evil consequences of that mistaken view do not need description here; but they seem to have found concrete expression in the above-quoted proposal of the Poisons and Pharmacy Bill to extend legal exercise of the business of a chemist and druggist with use of its trade description, to persons not duly qualified within the meaning of the Act—that is a proposal so directly opposed to the principle, the object, and the clear language of the statute as to appear either unaccountably paradoxical if those factors have received due consideration, or, if they have not been so considered, to be objectionable on ground even more cogent than that of its incongruity. Nor does the condition attached to that proposal furnish sufficient reason for an alteration of the existing Act that would have the inequitable effect of conferring upon companies, as unqualified persons, the same rights as have, during the past forty years, been acquired by persons who complied with the condition imposed by the Act, and have thus become legally entitled to enjoy the rights that Act confers.

A stipulation that in every premises where the business of a chemist and druggist is carried on, it should be *bona fide* conducted by a duly registered chemist and druggist, etc., may reasonably enough be applicable to such persons as might and do comply with the statutory condition as to exercise of the business; but its application to unqualified persons—necessarily outside the scope of the Act because they are unqualifiable—for the purpose of placing them in a position of legal equality with duly qualified persons, would be nothing less than flagrant violation of principles of justice and equity. Arguments based on alleged, or even on real, popular preference for the attraction of stores, as compared with the possibly frowsty character of some chemists' shops, can be of no value in

regard to the equity of this matter, except by introducing prejudice.

Most probably the paradoxical proposal of the Poisons and Pharmacy Bill may be traced to the strangely delusive argument by which a Court of Appeal and the House of Lords were led to reverse the judgment of Lord Chief Justice Cockburn and Mr. Justice Mellor, and to conclude that a company is not only a person naturally outside the scope of the Pharmacy Act, but also a body immune against the provisions by which the object of the Act is to be secured. The proposition that a company cannot be qualified—the very root of that argument—should have been sufficient reason for regarding it as reminiscent of such logic as would make a horse chestnut the same thing as a chestnut horse. The proposal of the Poisons and Pharmacy Bill may be evidence that the fallacy has now been found out, and cannot longer be relied upon to defeat the object of the existing Act. Before the higher tribunal of Parliament that position will no doubt be strongly supported. The supposition that the proposal of the Poisons and Pharmacy Bill can be confirmed seems, therefore, inconceivable, since the fact that a company, as a person, is necessarily unqualified, within the meaning of the Act, should alone be an insurmountable obstacle to such a stultification of that Act, and to the perpetration of injustice to legally qualified persons by a continuance of misconception or oversight.

Yours truly,

PHAR. CHEM.

The Personal Title.

SIR,—“M.P.S.,” who wrote in your last issue, must not look to the Pharmaceutical Society for defence of the personal title. Successive presidents have valued it so little that they have carried on business all their lives under what, if personal title means anything at all, were false names. You cannot expect a man, say “Jones” for example, trading as Smith & Co., or “Smith” with Robinson & Co., on his labels to make an excessive fuss about a man named “Dick” trading as Shoes, Cash Druggists. It is just possible the last would take the trouble to establish a “tu quoque,” and where would the President of the Pharmaceutical Society be then? Our rulers have never shown the sincerity that demands respect from the powers that be, and in consequence the poor rank-and-file have always had to suffer. If we, as a body, wish for the respect of Lord Crewe or anyone else, let us at least deserve it, and not be content with whining and shuffling.

Yours truly,

W. J. BROWN.

Ludlow, August 15.

Exemption from Jury Service.

SIR,—In view of the proposed Bill by which all registered chemists will be allowed to take the title of “pharmacist,” is it not possible to include exemption from jury service? To many of us who work single-handed this is a matter of great importance.

Yours faithfully,

Gillingham, Kent, August 8. W. LOUIS BARRETT.

Chemists on Holiday.

SIR,—I would like to call the attention of offending chemists to the custom prevailing among them at this period of the year—viz., leaving their shops in charge of unqualified assistants while absent on holidays. This is really a serious matter, when we are threatened all round with extinction, and we pose so much as the guardians of the public. We may find to our loss when the discussion on the Pharmacy Bill comes on that we are in the hands of the enemy through some of our own members' neglect of Pharmacy Act regulations. I noticed some time ago that assistants to chemists at Aberdeen were fined for selling poisons during their master's meal hours, and why chemists should be allowed to absent themselves for periods ranging from one to four weeks without complying with the law requires some explanation.

I am, etc.,

THE PHARMACY ACT ON HOLIDAY. (24/26.)

The Future for Qualified Men.

SIR,—In your comments of last week you say, “Is it worth while qualifying?” The answer depends upon which line one intends to strike out upon. If a man intends to be always an employé, by all means he should qualify; but, on the other hand, if going into business, it would be more profitable to spend the money and time in acquiring know-

ledge of business and methods of working modern business, and later, utilising the Companies Acts, to hire a qualified man's brains to do “the thinking in grains” while he does the organising and aspiring to big things. As a rule a chemist's mind after he has qualified is very narrow regarding modern commercial strategy. I do not quite agree with you as to the present shortage of qualified assistants. There is, and has been for many years, a big surplus, with the result that there are a great number of small businesses scattered throughout the land, and as soon as salaries rise the owners of these will close down and do better as employes. Again, it used to be the custom to employ assistants for routine shop work, putting up stock, etc. Now employers are adopting the more commonsense plan of using qualified labour for those items which require it, and cheaper labour (such as girls at 5s. to 10s. a week) to do work which does not require it. In this modern system one qualified man will take the place of two or more on the old plan.

Yours faithfully,

CESA. (23/29.)

Radium Research.

SIR,—As it possibly was the visit paid to Vienna by your celebrated chemist, Ramsay, that induced a gentleman to dedicate the gift to the Vienna Academy of Science towards the erection of a special institute for radium research, you may consider it worth mentioning that the sum was not 2,000*l.*, as printed in your issue of August 8, p. 234, but 500,000 crowns, equal to 20,830*l.*

Yours faithfully,

AN OLD SUBSCRIBER. (14/17.)

Poor Law Dispensers' Holidays.

SIR,—Permit me to draw the attention of the Irish Poor Law dispensers to the discussion on the above subject which took place at the August meeting of the Council of the Pharmaceutical Society of Ireland, and reported in your issue of August 15, p. 259. I should be glad to hear the views of the many Poor Law dispensers throughout Ireland, either through your columns or by letter, and their suggestions as to the best means of obtaining redress of our grievance. I should also be grateful if some of our English and Scotch brethren would state their position in the matter of holidays. At present we are placed at the mercy of the District Councils under which we serve, and who may grant or withhold payment of substitutes according to the particular humour in which they happen to be when application for leave is made to them. Surely our Council ought to see that its licentiates are placed on a proper footing in this matter, and that they be entitled by right to an annual holiday in the same manner as dispensary medical officers.

Yours faithfully,

Rathkeale, August 17.

EDWARD A. WHELAN.

Norwegian Trade.

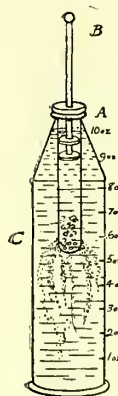
SIR,—Reading Mr. Wm. Bousfield's article advocating the establishment of a more extended trade with Norway, I agree with him, and see no excuse or reason why the London market should not supply goods and articles in general demand in Norway. I have no doubt that the apotheker of Norway would just as well buy English manufactured galenicals and pure drugs warranted to answer the tests demanded by the Norwegian Pharmacopoeia and of the character in use in Norway. I also believe that there would be a market for druggists' sundries and invalids' foods, medicated lozenges, tablets, etc., also crude chemicals. With regard to patent medicines, these would not have a ready sale, and would not be allowed to be sold unless accepted by “Medicinal Directøren” for Norway as *bona-fide* articles. Every patent medicine is analysed in this Department, the price compared with the contents, the medicinal value with pamphlets and advertising matter issued by the proprietors, and sanction is given accordingly or the sale is not allowed, and the public is informed. Proprietary medicines approved of, but containing patent drugs, are to be sold only subject to their being prescribed by a doctor. A few British patent medicines, etc., are to be had in Norway, such as Beecham's pills and Allcock's plasters, and are sold at rather more than nominal value. Articles to be sold in Norway should, of course, be labelled in Norwegian, and weights must be metric. Advertising in Norwegian papers is comparatively cheap, and bears no comparison with the charges in the

United Kingdom. For advertisements of about 12 sq. in. about 4 or 5 kroner (about 5s.) is charged in a daily newspaper issued in towns of about 10,000 to 14,000 population for a single insertion. In Christiania the charges are more, but in comparison cheaper than those of the larger provincial towns of England.

Yours truly,
NORSEMAN. (15/54.)

Tincture of Iodine Bottle.

The accompanying sketch is sent by *Rus* (237/67) as a simple modification of Dr. Karl Aschoff's solution-making stopper (*C. & D.* 1908, I. 940). It consists of a glass female syringe (B) with packing removed from the piston, and it fits into the neck of a graduated bottle (A). The piston serves, if necessary, to agitate the substance which is to be dissolved (c), and it is obvious that the arrangement can be quickly put together.



Phosphoric Acid in Aerated Waters.

SIR,—Speaking generally, citric and tartaric acids are regarded as the appropriate acids in the preparation of syrups for aerated waters. No doubt tartaric is the acid chiefly used for lemonade, ginger ale, and such like beverages. In the class of waters, however, which are more markedly of a tonic nature, there is distinct advantage in replacing a part of the organic acid by phosphoric acid. This not only adds greatly to the tonic value of the drink, but if in moderate and just sufficient proportion adds a pleasant piquancy to the acidity. As the intensity of phosphoric acid is much greater than that of citric or tartaric, less is required, so that the cost of the water is not increased by employing the inorganic acid. Of course, the amount in each bottle should not exceed a minor tonic dose of the acid.

Yours faithfully,

Edinburgh.

D. B. DOTT.

Synthetic Perfumes.

SIR,—Heliotropin, nerolin, muguet, and the whole gamut of artificial perfumes give much trouble to the chemist who strives to manipulate them, and are one of the few things pertaining to the craft about which *THE CHEMIST AND DRUGGIST* does not seem to be helpful. I give a few notes of my experience with them to encourage others to do likewise:

Variability of odour is characteristic of all synthetic scents; they smell differently every hour of the day. This, I suppose, is due to sensitiveness to the atmosphere, temperature, moisture, etc.

Lack of permanence is another well-known fault. Generally I find that they do best when mixed with a natural essence or essential oil, such as rose geranium, lavender, and the like; this rather modifies and makes more natural the odour. What one seeks is the law of combination of synthetic odours. Thus heliotropin and nerolin ought to augment the sweetness of each other's odour, but they rather seem to obfuscate the combined smell. Musk is ordinarily intensified by ammonia, but artificial musk appears aggravated if not decomposed.

The solubilities comprise another difficulty. Most of the synthetics are soluble only in very strong alcohol, which is injurious to the perfumes.

Yours faithfully,

Dublin, August 18.

J. C. McWALTER.

[The chapter on Synthetic Perfumes in "Pharmaceutical Formulas," beginning on p. 232, is generally considered to be the best English exposition on this subject.—EDITOR.]

Assistants in India.

SIR,—I am afraid Mr. F. Bliss's statistics about European assistants are entirely erroneous; the majority of the so-called indifferent assistants are sent out from home with the highest experience and credentials, and if there is any deterioration what is the cause of it? Employers can explain more implicitly, but they forget that everything goes against the assistant from home—language, climate, business, and shop. In some shops in the hill stations you cannot swing the proverbial cat, and when you have seven or eight dirty coolies and chappassies moving about you all day, and hardly a breath of fresh air, can you wonder if some of the assistants do make a poor start? Mr. Bliss does not mention the amount of night duty one has to do, "only on alternate nights," when even his delicate sus-

ceptibilities would receive a shock, and perhaps his customers, too, if he had to walk over two hundred yards to dispense a pound of hypo or a box of tobacco. Without exaggeration sales of this description occur about twenty times every night after closing hours. Marriage statistics are not a true criterion of the prosperity of European assistants. It is only in the hill stations that the percentage of married assistants is high, for if it were not for marriage one would possibly die of ennui, as it is considered more preferable to spend a winter in an English summer resort than a season in an Indian hill station. If Mr. Bliss considers Rs. 200 a month lavish munificence for a European assistant, especially to marry on, it seems strange that the Government of India will not allow their soldier clerks to marry under that sum. "Exile" is emphatically right in all he says.

P. O. (22/60.)

Dispensing Notes.

A Chlorate Gargle.

SIR,—I have a prescription

Pot. chlorat.	...	...	...	5j.
Tr. fer. perchlor.	...	...	...	5lj.
Glycerini	...	...	...	5iv.
Aq. chlorof. ad	...	...	...	5vj.

Fiat gargarisma.

Should I generate chlorine gas to any extent, or should I add the tincture to a dilute solution of the chlorate?

Yours faithfully,

MINOR. (20/37.)

[It is not intended that a gargle such as this should contain chlorine. Besides, even if it were, you could not generate chlorine by pouring tincture of perchloride of iron on potassium chlorate: the tincture is too weak in acid. It is immaterial how the ingredients are mixed. The rational way is to dissolve the potassium chlorate in the chloroform water, then add the tincture and glycerin.]

A Salicylic-acid Gargle.

J. R. Panama (17/13) asks how the following should be prepared so as to have a good appearance:

Acid. salicylic.	...	...	...	5j.
Alcohol	...	...	...	5ss.
Glycerini	...	...	...	5j.
Aquam ad	...	...	...	5vj.

M. To be used as a gargle.

[To obtain a clear solution borax (about 75 grains), solution of ammonium acetate (about 10 fl. dr.), or rectified spirit (about 2 fl. oz., or more, over the quantity in the formula) could be used, but the salicylic acid would not (except with spirit) be free, and it is questionable if these be permissible. The gargle looks very well when made up as written. The large proportion of glycerin gives the liquid sufficient body to retain the acid—which should be finely powdered—very well in suspension.]

Legal Queries.

For concise statements respecting various Acts which affect directly or indirectly the Chemical and Drug Trades, see the "C. & D. Diary," 1908, p. 456; Stamped Medicine Law, p. 435; Pharmacy and Poisons Law, p. 448; and Patents Law, p. 442.

Nemo (21/57).—Unstamped "dummies" of dutiable medicines may legally be exhibited in one's window or shop.

J. M. (15/3).—Mixing glacial acetic acid with water is not making vinegar in the sense of the Act that requires vinegar-makers to take out a licence.

C. W. D. (16/3).—Alopecia is an ailment of the human body, so that your label for a preparation to be used as a remedy for alopecia makes it liable to medicine stamp-duty.

Market (18/15).—Proprietary and other medicines cannot be sold in public market-places, because licences for the sale of stamped medicines are only given in respect of premises; booths, stalls, and other movable places are not included in "premises."

J. H. R. (23/1).—Please turn up your copy of the *C. & D. Diary* and read the paragraphs on Ailment Names, Exemptions, and Chemists. There is not a single "difficulty" referred to in your letter that has not been by anticipation explained in the "Dictionary of Dutiable Medicines."

H. I. W. (21/58).—(1) There is nothing in the Poisons and Pharmacy Bill to compel drug-store proprietors who are not

qualified chemists, and who do not sell or dispense poisons, to employ registered chemists as managers. (2) The Isle of Man Pharmacy Act is briefly epitomised on p. 448 of the *C. & D. Diary*. Its terms as to titles are the same as in Great Britain.

J. D. (18/64).—The manager is perfectly justified in refusing to accept responsibility for matters over which he has not absolute control, and if his employer is not prepared to agree to the manager's conditions in that matter, the sooner the engagement is terminated the better. An employer cannot recover from a manager of a shop the value of goods that are stolen, unless he can prove that the theft has occurred through the wilful negligence of the manager.

Qualified Manager (25/1).—The responsibilities of a qualified manager for accidents occurring in the branch shop which he controls depend primarily upon the terms of his engagement. The employer is responsible in civil law for any damage which may result from the wilful negligence of any of his employes, whether qualified or unqualified, and no conditions of the agreement with a qualified manager may free him from this responsibility. The case to which you refer was one of alleged criminal negligence. If similar circumstances were occurring in a branch shop, criminal proceedings might be instituted against the manager and other individuals directly concerned, as well as the employer; action would depend upon the result of the coroner's inquiry.

Subscriber (15/36) let a house on a yearly tenancy to A. A. moves into another house before the expiration of his term, three weeks before which the house agent B., who has received the key (to show anyone over) from A., gives it up to C. (the next tenant) with possession without the knowledge of either A. or self. A. now refuses to pay the three weeks' rent due. C. also refuses to do so. Who is liable for the rent, and how shall "Subscriber" recover? His agreement with C. dates from the expiration of A.'s tenancy. [We are afraid "Subscriber" is in a difficulty in this matter, as by accepting the key (through his agent) we think it would be held that there has been a surrender of the tenancy, in which case "Subscriber" is not entitled to recover from A. It was probably part of the arrangement with "Subscriber's" agent that C. should have possession at once, although the rent was to commence from the expiration of the old tenancy, and we do not think "Subscriber" has any remedy against C. "Subscriber" had better make a claim against his own agent for negligence.]

Miscellaneous Inquiries.

We endeavour to reply promptly and practically to trade questions of general interest, but cannot guarantee insertion of replies on a particular date, nor can we repeat information given during the past twelve months. A preliminary condition for reporting on samples submitted is that all particulars as to source and uses are given to us.

Entomol (13/37).—PREVENTION OF MITES IN BUTTERFLIES.—The solution of perchloride of mercury containing 2 dr. to the pint of methylated spirit, mentioned in Shenstone's third lesson on "Field Botany" (*C. & D.*, July 18, p. 78), is what you want. Apply with a brush.

J. P. (23/37).—TR. LOBELIÆ ACIDÆ:

Lobelia herb ...	...	...	...	3ij.
Capsicums ...	...	...	...	3ij.
Boiling vinegar ...	...	...	...	3xvj.

Macerate ten days, and filter.

Dose: 3ss.

J. G. (12/20).—The following is a book which may suit your purpose: Barton's "Veterinary Manual for Horse Owners" (Everett, 10s. 6d.).

Aliqua (2/23).—DOSES OF CALOMEL AND GREY POWDER for infants and children depend upon the object of the administration. They differ greatly in action, grey powder being the better alternative, especially in diarrhoea, when an effective dose for an infant up to six months old is $\frac{1}{8}$ grain, and above that to twelve months $\frac{1}{4}$ grain, with $\frac{1}{2}$ grain of sodii bicarb. More is frequently given, but with little advantage over smaller doses. Calomel is usually given in doses of $\frac{1}{4}$ grain for two to four months, $\frac{1}{2}$ grain for four to six months, $\frac{1}{2}$ grain for six to nine months, and 1 grain for nine months upwards. Infants tolerate larger doses of calomel than they are entitled to by theory.

Bremo (2/22).—See the reply to "Quercus" in *C. & D.*, August 8, p. 250.

Subscriber (242/57).—The plant which you sent was *Rosa luteola*, a common plant in waste places, particularly on chalky soils. It was formerly used for dyeing yellow.

E. W. G. (Montreal) (254/48).—Invest the money in a copy of the new edition of "Pharmaceutical Formulas," which contains what you want. You can obtain a copy from the National Drug & Chemical Co.

Kerosene (13/62).—For printing on catheters try galalith (Sydenham & Pounds, 3 Crutched Friars, E.C.).

A. B. (16/62).—"The Manufacture of Paint" (Scott Greenwood, 7s. 6d.) may suit you.

A. B. (11/12).—LEMON CURD.—See *C. & D.*, April 18, p. 611, for an excellent formula. You will find several recipes for bun spices in "Pharmaceutical Formulas."

Gandy (12/63).—TUCKER'S ASTHMA CURE.—In the action *Tucker v. Wakley* (*C. & D.*, 1908, I., 112) various analyses were submitted, showing that each ounce of the preparation contains, approximately, cocaine $2\frac{1}{2}$ grains, and atropine 1 grain, with an alkaline nitrite. The solvent appears to be glycerin 1 part, and water 4 parts.

R. S. (6/14).—FLEAS, BUGS, ETC., IN A ROOM.—Better try fumigation with a nicotine insecticide, which is more effective than corrosive sublimate, and not so deadly to human beings. Follow it with formalin vapour.

A. K. M. (12/25).—Put a piece of G.P. tissue between the cork and bottle used for sal volatile, and tr. quinin. ammon. You will find the recipes you require in "Pharmaceutical Formulas."

Iodo (12/19).—NON-POISONOUS WEED-KILLERS.—Common salt, sulphate of copper, washing-soda, and caustic soda are among the non-scheduled articles which in solution kill weeds on garden-walks.

F. C. O. (16/22).—"Sauce Gruffs" can only be obtained from makers of sauces, who, however, do not usually sell their "gruffs." What they cannot use they burn or otherwise destroy.

H. B. M. (18/39).—SEPARATING WOOL FROM COTTON.—We know no method of dissolving away or destroying the wool from the cotton in a mixture. The cotton, however, may be dissolved away by means of a fresh solution of copper oxide in strong ammonia. Picric-acid solution dyes wool fibres, but not cotton, so in a mixture of the two the microscope would reveal its nature.

Canis (17/65).—SHAMPOO FOR DOGS.—Try the following modification of the "Veterinary Counter-practice" formula:

Saponis mollis	...	...	...	3v.
Thymol, camphoræ, et ol. gaultheriæ	...	...	...	aa. 3ss.
S.V.M.	...	...	...	3viiij.
Aq. ad	...	...	...	3XL.

Dissolve the thymol, camphor, and oil in the spirit, and add to a cold solution of the soap in a pint of boiling water; then make up to 40 oz.

Programmes (5/45).—PERFUMING PROGRAMMES.—Three different methods are given in "Pharmaceutical Formulas," seventh edition, p. 232.

Bolton (223/19).—FIXING DYE ON COTTON-WASTE.—Through the intervention of a mordant cotton can only be dyed, except with dyes of the benzidine type such as Congo red (crimson), benzopurpurin B or 4B (scarlet dyes), which are not very permanent, but the benzopurpurins are much faster to light than Congo red. The acetates of iron and aluminium act as valuable mordants, since on steaming they fix the dye perfectly owing to the formation of insoluble basic acetates. Albumen and tannic acid may be used in the same manner, the last-named frequently in conjunction with tartar emetic, stannic chloride, etc.

Mizpah (21/2).—SAPONIFYING WAX.—All waxes are readily saponified by boiling with alcoholic solution of potassium hydrate, and some waxes, such as Japan vegetable wax and myrtle wax (but not beeswax), are saponified by aqueous potash solution. The latter method, applicable to vegetable waxes, is naturally the cheapest.

Arb. (252/37).—PHOSPHORISED TONIC DROPS.—The following is from the new edition of "Pharmaceutical Formulas":

Acid. phosph. dil.	...	...	...	3iij.
Tr. ferri perchlor.	...	...	...	3ij.
Quinina sulphat.	...	...	...	gr. v.
Snt. chloroformi	...	...	...	3j.
Glycerin. ad	...	...	...	3j.

Dose: Five to 15 drops in a wineglassful of water.

Acetum (253/38).—We have been unable to ascertain what the dipsomania cure consists of. You will find a good deal of information about such cures in "Pharmaceutical Formulas," p. 582 and p. 889. The treatment which you mention is probably on the lines of the latter method.

WHOLESALE.

DRYS, Wets, Packed Goods; 12 years' experience. "Elsie," 18 Agnes Street, Nottingham.

GENTLEMAN with pony-trap wishes to Represent one or two good firms. 142/30, Office of this Paper.

ELEVEN years' City and provincial Wholesale; also Retail and Apprenticeship; aged 30. 143/6, Office of this Paper.

TRAVELLER (Chemist), resident in Liverpool, desires good Agency. Apply, "Camphor" (25/63), Office of this Paper.

JUNIOR (20), tall, energetic, desires situation in Wholesale; 5½ years in Retail. State wage, etc., to 141/13, Office of this Paper.

EXPERT Pill and Tablet Maker; well up in Coating; 17 years' experience; good references. Address, "Piltab," 41 Stanley Street, Derby.

DEPARTMENTAL Head; some years with eminent firm; shortly at liberty. Write, "Manufacturing" (22/403), Office of this Paper.

CHEMIST; qualified; post in Wholesale, Works or Warehouse; exceptional experience; Retail, Wholesale, and Manufacturing. 22/34, Office of this Paper.

AUSTRALIAN Markets.—Traveller would like to hear of a firm requiring a Representative for Australia; good references. Mate, 24 Angell Road, Brixton.

AN extra Commission, good-class Side-line, or Agency is wanted by a Traveller with a really first-rate connection in North of England and Scotland; would do pioneering. "System" (144/10), Office of this Paper.

YOUNG man, earnest and industrious, 8 years' Retail experience, desires opening in Wholesale house; any capacity. "B," 14 Brunswick Park Road, New Southgate.

CHEMIST, qualified (26), desires post with Wholesale firm in Laboratory or Warehouse; first-class Retail experience; good references. Particulars, 137/14, Office of this Paper.

JOURNALIST (24), experience of Wholesale Chemicals, Groceries, Aerated Waters, in England and America, desires engagement in London. Harrod, Balliol House, Whitechapel, E.

DRUGS, Sundries, Instruments, Dispensing Bottles, or Specialities (Doctors' and Chemists'); Traveller desires re-engagement; part-expenses and salary; excellent references. "Energetic" (143/15), Office of this Paper.

PACKED GOODS.—Open up or Manage; advertiser with 16 years' experience could start or Manage a Packed Goods and Toilet Department; good certificates; sound knowledge of Chemistry, Drugs, etc. "L. C. C." (141/27), Office of this Paper.

ADVERTISER seeks appointment as Sales Manager, Departmental Manager, or responsible executive position; good organiser; well versed modern business methods; expert card and other systems; views moderate regarding remuneration; age 34. 141/26, Office of this Paper.

TRAVELLER, with 15 years' good connection (mainly North and Scotland), well known, seeks re-engagement in Sundries, Perfumery, or Specials, with a good-class house; irrefragable character. "Manchester" (144/01), Office of this Paper.

MISCELLANEOUS.

CONTINENTAL Manufacturer, controlling economical, very saleable and profitable Toilet Novelty, desires to hear from first-class British houses having large connections with the Retail Chemist trade, who would be in a position to act as Sole Agents for this Novelty in the United Kingdom; this is an excellent opportunity for a large and progressive concern to secure a splendid Agency. Address, with full particulars, "Toilet Novelty," c/o H. Powell Rees, Ltd., 11 Arundel Street, Strand, W.C.

MCADAM & TUCKNISS, Sharedealers, 30 Tranquil Vale, Blackheath, S.E. Telephone 81 Lee Green.

SHARES for SALE (free of commission, subject).—20 Brunner Mond, £5 3s. 9d.; 20 Evans Lescher Preference, £5 5s.; 40 New Preference, 50s. paid, 52s.; 100 Pears, 32s. 6d.; 100 Lever Preference, £11 3s. 3d.; 100 Peek Frean Preference, 21s. 7½d.; 38 Meggeson Ordinary, 19s. 3d.

SHARES WANTED (subject).—100 Camwal Preference, 9s. 1½d.; 250 Ordinary, 2s. 1½d.

List of shares for sale and wanted sent free on application. Bankers, London and County. Established 1898.

DO YOU WISH

to know how to increase your turnover and your profits too. If so learn to test sight and add Optics to your business as a side-line, which has been proved to be the most profitable a chemist can have. My Correspondence Course in Optics and Sight-testing will help you. Write for particulars.

G. E. Bamister Practising Optician, BLOXWICK.

CO-OPERATION.—RETAIL CHEMISTS ONLY.—Write at once for particulars of new scheme of sharing profits (over and above usual 3½ discount) of only Patent Medicine of its kind. Send stamped addressed envelope and business card to T. Holme, Ethelbert, Cambridge Road, New Malden, Surrey.

GREAT BARGAINS IN SECOND-HAND FITTINGS.—Set of recess-label rounds, 24 30-oz., 60 20-oz., 24 10-oz., 12 2-oz. syrups for £9 5s.; the fittings for a shop, including drawers, shelving, counters, dispensing screen, etc., £25; 1 12-ft. range of 60 gold-labelled drug drawers, open lockers, £4; 1 12-ft. range of 60 drug drawers, lockers, bottle shelves, with part mirror backs, pilasters, and cornice, £7 10s.; 1 10-ft. counter, mahogany top, fitted with 6 drawers and till, £4 10s.; 1 6-ft. ditto, fitted with 4 drawers, 45s.; 1 6-ft. arched mirror centre dispensing screen, glass shelves in cases, £4 10s.; 1 7-ft. dispensing counter, with 8 drawers, 50s.; 1 6-ft. wall case, 8 ft. high, £5; 1 nest of 6 counter drawers with till, 20s. R. TOMLINSON & SONS, Bond Street, Constitution Hill, Birmingham.

CHEMISTS' SHOP-FITTINGS (SECOND-HAND).—Ranges mahogany drawers, with bevelled-edge glass labels and cut-glass knobs, shelving above, lockers below; mahogany dispensing-screens, counters with glass-case fronts, wall-cases, bent-front and flat-top counter-cases, counter-desks, tooth-brush cases, complete shop-rounds, etc.; every requisite for chemists; extensive stock to select from at extremely low prices; practical men sent to all parts; illustrated catalogues and estimates free. MATTHEW S. CHEMISTS' FITTER, 14 and 16 MANCHESTER STREET, LIVERPOOL.

RETAIL CHEMISTS.—The Writer and Designer of Advt. "Do you read Mighty Atom" series, etc.? Will be pleased to hear from any Chemist who requires any more of the same excellence; above have been copied and issued broadcast; this speaks for itself; next series copyright, registered, and reserved for clients. "Plax" (22/304), Office of this Paper.

SECOND-HAND CHEMIST'S FITTINGS.—We have an exceptionally fine selection of these in all sizes; prices are right and goods are in first-class condition; we shall be pleased to supply particulars and prices. Call or write, RUDDUCK & CO., 262 OLD STREET, LONDON, E.C.

CHEMISTS' Second-hand Shop Fittings, etc.—6 ft. screen, plate mirror centre, counter under, £7 10s.; 6-ft. top and bottom wall-case, shelving inside, £7 5s.; drug-fitting, 10 ft. long, drawers, lockers, shelving, and cornice, complete, £7 15s.; also 100 other bargains, very cheap for immediate sale. PHILIP JOSEPH & SONS, LTD., 93 Old Street, London, E.C.

TO MAKERS OF DRUGGISTS' CABINETS or LABEL HOLDERS.—The owners of Patent No. 16,431 of 1904, relating to "Improvements in druggists' label-holders," desire to negotiate with manufacturers with the view of granting licenses under it on reasonable terms. For information apply to Messrs. Lloyd Wise & Co., Chartered Patent Agents, 46 Lincoln's Inn Fields, London, W.C.

ARTIFICIAL TEETH.—Painless Extractions.—In these days Chemists require a really good money-making Side-line; why not take this up, the best of all? Just consult T. Barton, the Chemists' Mechanic, 194 Mansfield Road, Nottingham, who can give you all tuition and do your work. Numerous references from Chemists.

TO Apprentices, Juniors, etc.—If you wish to pass the Preliminary quickly and with little trouble, write to Mr. Charles Harker, who will coach you by post; thorough, systematic teaching; numerous successes in three and six months; special attention given to those of neglected education; 76 per cent. recent successes; terms very moderate. Charles Harker, "Marlow," Angel Road, Harrow.

JUST TO REMIND YOU my smart Tickets in 3 colours bring you record business; send your wording, but leave designs to me; I will guarantee to surprise and please you; stout cards, 5 by 4, 8 for 1s., 8 by 5, 7 for 2s., 10 by 8, 4 for 2s., samples 3d., 5d., and 9d. each. Address, "Ticket" (143/17), Office of this Paper.

Minor Experiences.

London.

Ergot (251/68) tells the story of his recent successful negotiation of the July Minor examination in London.

CHEMISTRY.—On entering the examination-hall I was sent to chemistry, and commenced upon the volumetric work, which was to estimate, by means of ferrous ammonium sulphate and also pure oxalic acid provided, the amount of potassium permanganate in a solution which was stated to be approximately decinormal. Two titrations were completed with the iron salt, but sufficient permanganate solution was left for one titration only with oxalic acid. For qualitative analysis a solution was provided, which on evaporation yielded a residue, from which a green flame could be obtained. The examination for group metals did not show any present, and the tests for acid radicles was proceeding when time was called, and the report was left without anything being entered as found.

PHARMACY.—The following items were given me to dispense:

P. nucis vom. ...	...	10 centigrams
Jalapin. ...	...	6 centigrams
Hyd. subchlor. ...	...	4 centigrams
Sacch. lactis ad ...	...	0.5 gram

Fiat cachet j. Mitte x.

Creosotum ... m.j.

Ft. pil. Mitte xxiv.

Make a solution (50 grams) containing 1 per cent. each of phenol and iodine in liquid paraffin.

Make the B.P. quantity in ounces of ung. hyd. ox. rub.

Ac. hydrocyan. dil. ... m.jss.

Liq. strych. ... miv.

Syr. tolt. ... 3j.

Inf. rosæ acid. ad ... zss.

Mitte xvj.

Sufficient for fifteen cachets was taken, and after weighing out the ten I was told to weigh the remainder. For the phenol and iodine solution a glass mortar was used to triturate the iodine with half the oil, dissolving the phenol in the remainder. The pestle given was so small that the iodine was not quite dissolved at the call of time. The paraffin ointment had to be made for the ung. hyd. ox. rub., and I was chaffed by the examiner because 5 oz. was made when only 2½ oz. was required.

SECOND DAY.

CHEMISTRY.—I was told to write down all the sulphides I knew, and then to mark those that were soluble in HCl and H₂O. How was bismuth found and how obtained from its ores? What was an "oxy" salt? What other name might be given? I said "basic." What was silica? What colour was sand? What impurity did it contain? What was it soluble in? How would I prove that H₂SiF₆ contained silicon? What was glass? What was the action of HF on glass? If I were to shake up a mixture of melted suet and KOH what should I obtain? What was stearic acid and its formula? How did it differ from oleic acid? What did I mean by saying oleic acid was unsaturated? How should I prove it? What was glucose and its formula? How obtained? What was hydrolysis? I said how glucose was obtained and spoke of "inverting" sugar, and was then asked what was meant by "inverting"? From this questions were asked on polarised light and its uses. Next, did I know any oxides of copper? How was Cu₂O obtained, and what colour was it? Whence did we get benzene? What came over with it? What were xylene and toluene and their formulas? What was obtained by oxidising toluene and how should I set about doing it? What was benzyl chloride and its formula? Did I know what an ester was? Give examples. If I had a mixture of KCl and KI, how would I prove iodine is present? What was the ordinary test for iodine? What did it form with starch? Did I know anything about physics and had I ever seen a clinical thermometer? How did it differ from an ordinary thermometer? Had I heard of the new way of making HNO₃? On replying in the negative, I was told that it was obtained from the nitrogen of the air. How was salicylic acid made artificially? Did it occur naturally?

MATERIA MEDICA.—In this subject I did badly. About thirty specimens were given for recognition, among others coca-leaves, hellebore rhizome, jaborandi-leaves, hamamelis-bark, ipecacuanha-root, and belladonna-root. The last I began chewing, and by a freak of imagination thought I tasted liquorice! I was promptly told I ought not to be let loose, so I returned to my seat in no enviable frame of mind.

PHARMACY.—In this subject I was asked how would I test for salt in lard? For starch? For water? What were the lamellæ? Their respective strengths? How was spt. æther. nit. made? What was the copper there for? How would I make spt. ammon. aromat.? The strength of tinct. myrrhæ and how made? Ext. ipecac. liq.; how made and the assay

process for same? What was distillation, sublimation, and percolation? What was liq. trinitrin. made with and how would I test its strength? What precautions would I take in selling arsenic, tinct. opii, and Easton's syrup tabloids? What was hard soap and animal soap? How made? How was tinct. opii made? What was its strength?

BOTANY.—First I was asked what the green colouring-matter of plants was and its function. Did I know any plants without chlorophyll? I mentioned the mushroom, and was asked if it would grow in the dark? Next if a bean would grow in the dark? I said it would to a certain extent. Why only to a certain extent? I said owing to it not being able to elaborate its food material, and was asked how it was that it grew at all? The reply was owing to the food stored in the cotyledons and endosperm, the latter mentioned without thinking, whereupon I was asked if the bean was albuminous, to which I replied in the negative. What was cambium? Was it found in dicotyledons, monocotyledons, or conifers? What tissue did it give rise to? What was the characteristic tissue of the xylem? Of the phloem? What was the function of the vessels and the sieve-tubes? What were lenticels and cystoliths? Then I had aconite, fennel, and male fern plants to recognise. What did I see on the back of the fronds of the latter? Could I see the sporangia? What would happen if a spore from the sporangia fell to the ground? In conclusion, a section of a conifer was given me and questions asked as to the difference between a conifer and a dicotyledon in structure?

PRESCRIPTION-READING AND DOSES.—Two calculations were given, one in the metric system and the other in imperial weights and measures. Then came three prescriptions, the directions of which had to be turned into full Latin. I was asked the equivalent of aqua laurocerasi to 1 minim of acid. hydrocyan. B.P., and then about thirty doses. What colour would I expect an ointment to be containing equal parts of ung. hydrarg. and ung. iodi? How would I dispense a pill containing argent. oxid. and creosote? On answering these I was told I could go. A few minutes later I was in possession of the coveted piece of blue paper.

WHERE TO STUDY.

The following educational institutions are advertising in this issue:

School of Pharmacy, 17 Bloomsbury Square, London, W.C.
South London School (Muter's), 325 Kennington Road, London, S.E.

London College of Chemistry, 323 Clapham Road, London, S.W.

Westminster College of Pharmacy, 402 Clapham Road, London, S.W.

South of England College of Pharmacy, 186 Clapham Road, London, S.W.

Manchester College of Pharmacy, 225A and 227A Oxford Road, Manchester.

Northern College of Pharmacy, 100 and 102 Burlington Street, Manchester.

University of Birmingham, Birmingham.

EDUCATIONAL INFORMATION.

THE BRITISH OPTICAL INSTITUTE, 6 Mount Edgecumbe Gardens, Clapham Road, London, S.W., inform us that the fees for the "courses of instruction were incorrectly given on p. 291 of our Educational Number." The dioptric course (1) theory, costs only 3l. 3s., and (2) the fee for practical work, sight-testing, frame fitting, frame making, and repairing, lens grinding and polishing, etc., is 5l. 5s., or the two courses combined 7l. 7s. The Fellowship course is in two parts (1) theoretical, costs 5l. 5s., and (2) practical, 7l. 7s., or together 10l. 10s.

PRISON DISPENSERS.—The regulations for compounders in the prison service in England and Wales now admit applicants between the ages of twenty-four and thirty-five years, inclusive, and the scale of remuneration is 105l. per annum, rising by 2l. per annum to 125l., then by 5l. per annum to 150l., with quarters, or 15l. 12s. per annum in lieu thereof. Candidates must hold a diploma (at least the Minor) of the Pharmaceutical Society of Great Britain, and must satisfy the Civil Service Commissioners as to their qualifications in reading, writing, orthography, and arithmetic. The duties consist of dispensing medicines, assisting in keeping medical records, keeping medical and surgical instruments in order, assisting in the performance of surgical operations, doing the duties of hospital warder when necessary, and keeping the dispensary and its stores. An application-form for appointment to the subordinate staff in the prison service has first to be obtained from the Civil Service Commissioners, Burlington Gardens, London, W.

SPANISH QUICKSILVER.—The exports of quicksilver from Seville during 1907 amounted to 1,451 tons, against 1,437 tons in 1906, 1,275 tons in 1905, and 1,132 tons in 1904.